The Harveian Lectures
ON
PAINFUL MENSTRUATION.

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LECTURE III.

SPASMODIC DYSMENORRHŒA.

MR. PRESIDENT AND GENTLEMEN,—This division, which includes the great majority of severe cases, is the only one which is justly entitled to the name "dysmenorrhœa." As has been already stated, I consider it to include membranous dysmenorrhœa, to which I shall have to refer, since it elucidates many matters otherwise obscure. This affection is called spasmodic on clinical grounds. It is spasmodic. Unlike the vague and fixed aching of congestive or inflammatory dysmenorrhœa, the pain comes on punctually; typically intermits, or at least varies in intensity; and is spasmodic or colicky in character. Neuralgic is a sufficiently correct but less descriptive title. The pain is sharp, and doubtless it is through nerves that the pain is felt. "Obstructive" and "mechanical" are theoretical names, into whose correctness I shall presently inquire.

Natural history of spasmodic dysmenorrhœa.—In the great majority of cases this is primary; that is, it begins with the onset of menstruation. The typical relation of the pain to the flow is that the pain precedes the flow by a few hours, or by a day or two, and lasts some twenty-four to forty-eight hours; that is, until the flow is well established, when it much diminishes or ceases. The situation of the pain is, practically, in the womb, or it is referred externally to the lower part of the hypogastrium, just above the pubes. The character of the pain is intermittent, or varies in intensity, and, typically, it comes in pangs. It is described as "labour-like," "cramp-like," "forcing," &c., and is, in fact, uterine colic. The duration of the pain, as above said, is generally from twenty-four to forty-eight hours, till the flow is well established. The intensity of the pain varies from slight pain to agony, and its manifestations may include groaning, rolling on the floor, vomiting, or fainting. In some cases pain for an hour or two will cause a shock which will last for the rest of the month. The character of the flow is scanty, especially during the time when the pain is most intense. The blood is often mixed with clots, which on examination are found to be the membranes of membranous dysmenorrhœa. The effect of time on the disorder is that the pain increases, and in cases of unmarried women who are not treated, ceases only with the menopause. The effect of marriage is, in itself, generally to increase the disorder. The patients are often sterile, and in lack of pregnancy generally get worse and worse. If pregnancy ensues, and especially if it ends in a full-time natural delivery, the patient is usually permanently cured. To nearly all these typical characteristics there are, however, exceptions. The disorder may not be primary, but may be acquired, in some rare instances, in women who have rapidly borne many children. This, which seems inexplicable, really throws light on the affection, which is essentially a colic, and may ensue in worn-out uteri, just as after-pains may also affect such uteri, the affection in both cases being, as has been justly insisted on by the late Dr. Matthews Duncan and others, of the same nature. In other cases it may follow general or local exciting causes. In some cases the pain may not precede the flow, and may not be relieved by the flow. This is especially the case in membranous dysmenorrhœa. The situation of the pain may be inguinal, or like that when the appendages are inflamed, or may radiate to the whole of the pelvic viscera, especially in membranous dysmenorrhœa. It must be remembered that transference or radiation of sensation is not very rare in the pelvic organs, that the passage of a sound may cause typical ovarian pain, and that pressure on an ovary may cause pain in the opposite ovarian region. The character of the pain is not always intermittent, it may be continuous; perhaps because one spasm overlaps another. In rare cases it is intermenstrual, or occurs where there is no flow of blood at all. Again, in rare cases, the flow is not scanty, and may even be profuse, especially where it is accompanied by the discharge of membranes. The effect of time is sometimes in the direction of relief, with improvement of the general health. In one case, in which spasmodic dysmenorrhœa had distressed an unmarried Frenchwoman so intensely as to incapacitate her for some two days every month, I witnessed a paroxysm, which was accompanied by vomiting, faintness, and rolling in agony. It was so severe that I recommended dilatation. The next period, however, and several periods after were perfectly painless. It is quite possible to indulge in poetical speculations as to "sensory and vaso-motor storms," but, as I have no scientific facts to help me, I prefer merely to relate the phenomena. Lastly, it must not be forgotten that more than one form of dysmenorrhœa may be present at the same time.

Pathology.—Until the last few years the question of the pathology of spasmodic dysmenorrhœa was considered settled by a very lucid and intelligible explanation known as the mechanical system of uterine pathology. The theory of this pathology was that it was owing to obstruction to the escape of the menstrual fluid, due to flexions of the uterus or to stenosis of some part of the canal. Other elements are cited, in the shape of the texture of the uterine tissue and disorder of the uterine circulation by flexion. They are thus summarised:—1. Flexion of the uterus causing a virtual stricture at the angle of flexion. 2. Congenital narrowness of the cervical canal, in association with the presence of an infantile uterus. 3. Congenital narrowness of the os internum. 4. Congenital narrowness of the os externum. 5. Swelling of the cervical mucous membrane, causing obstruction. 6. Increased flow of blood, the canal being too small to allow its free escape. 7. Fibroid tumours compressing or distorting the canal. 8. Chronic congestion of the uterus associated with flexions. 9. Small intra-uterine polypi obstructing the canal. 10. Elongation of the vaginal portion of the cervix, often associated with flexion of the canal of the cervix. 11. Contortion of the cervical canal, dependent on irregular hypertrophy of the cervix. I shall deal with these *seriatim*, endeavouring to state the case with fairness, and to appeal to facts in support of any position I may feel obliged to take. The headings, however, may be summed up more shortly, as follows:—(A). Flexion of the uterus causing obstruction (1, 10). (B) Stenosis, congenital (2, 3, 4); due to swelling of the mucous membrane (5), fibroids (7), polypi (9), hypertrophy (11), increased flow of blood (6). (C) Chronic congestion of the uterine walls, due to flexion (8).

A. *Flexion of the uterus causing obstruction.*—This seems at first a self-evident cause. It is said that a tube bent at an angle kinks itself, and the calibre is narrowed. It is also certain that in many cases of spasmodic dysmenorrhœa the uterus is flexed. It remains for us to ascertain whether (1) flexion is essentially associated with obstruction; (2) flexion is essentially associated with dysmenorrhœa. 1. Does flexion of the uterus cause narrowing of the canal? The evidence adduced (besides that of the presence of dysmenorrhœa) consists in—(*a*) difficulty in passing the sound; (*b*) the evidence of specimens of flexed uteri; (*c*) the illustration of bent tubes. *a.* Difficulty in passing the sound: This is no evidence of obstruction. First comes in the question of skill. We must be sure that the attempts have been skilfully made. In the case of most of those who have written, this may be taken for granted. But with all the skill in the world, no one can be certain of hitting off exactly the right direction in such a canal as that of the cervix. This is barrel-shaped, and marked with large folds of mucous membrane, into which the sound sometimes easily passes. It is notorious that some of the most difficult cases on which to pass the sound are those where the canal is dilated, too wide and not too narrow, and where the cavity is dome-shaped. In these cases it is easily intelligible that to hit off the right spot is a matter of difficulty. The real test of stenosis is the resistance experienced in *withdrawing* the sound after it has been inserted. Here the question of wrong direction is eliminated. Another cause of difficulty is the bend undoubtedly. But here the question is again one of direction. A passage ever so wide may cause difficulty to a body passing through it at variance to its long axis. Here again the test is the presence or absence of difficulty in withdrawing the sound. A further question, whether real stenosis produces dysmenorrhœa, will be discussed hereafter. *b.* The evidence of flexed uteri: This is entirely against the theory that flexion of the uterus causes

obstruction. A list of the specimens of anteflexion in the London museums is given by Dr. Herman.[1] They are to be found in the museums of University College, Royal College of Surgeons, Guy's Hospital, and the London Hospital. Specimens of retroflexion are to be found in the museums of the Royal College of Surgeons, University College, King's College, and the Middlesex Hospital.[2] They can be seen by any who choose to look for them, and none of them shows obstruction of any amount or dilatation, unless complicated by adhesions, or any spur at the angle of flexion which is so often described. The canal may be curved, but its calibre is little, if at all, diminished. The illustrations which are found in books dealing with the subject are all, so far as I have seen them, mere diagrams representing the supposed condition, and illustrating the theories of the writers, but I can find no drawing of an actual section through the canal of a flexed uterus showing the alleged condition. Some of these diagrams show an enlarged cavity and thickened walls, both of which are incorporated into the argument, but are also diagrammatic. As a matter of fact, hypertrophy of the uterine walls may accompany the progress of a case of spasmodic dysmenorrhœa, but, as in the case of membranous dysmenorrhœa, is capable of a different interpretation—namely, the extra work entailed by uterine colic. If associated with a flexion in a uterus whose canal is still fairly patent, obstruction, at least, cannot be its cause. Dilatation of the uterine cavity may be found in cases in which adhesions have formed round a uterus, whether flexed or not, impeding its contractions, and in such cases dysmenorrhœa may be present, but is to be attributed to the sequelæ of inflammation, which are themselves an efficient cause. *c.* The illustration of bent tubes. It is assumed that bending of a tube narrows its calibre. The tube is assumed tacitly to be such a tube as an indiarubber one. If this is bent beyond a small amount it kinks, and it is assumed that the same happens in the case of the uterus. But illustration is no argument, and the truth is that the kinking depends on the ratio between the external diameter of the tube and of its canal; in other words, a thin-walled tube will kink, but a thick-walled tube will not kink. Now, the uterus is emphatically a very thick-walled tube and is much too thick to kink, as all specimens of flexed uteri show. Moreover, if the calibre were a little narrowed, there would still be a considerable space left for the small amount of blood which passes during a menstrual period. This varies greatly; but if we take it as four ounces on an average, flowing during four days, this will give the following results: one ounce in a day, twenty drops in an hour, one drop in three minutes. What sized canal is required for this?

B. *Stenosis.*—This has been partially discussed above. The causes have also been summarised. *a.* Congenital stenosis is generally illustrated by that form known as "conical cervix" with "pinhole os." This pinhole os rarely fails to admit the uterine sound, which is certainly larger at its smallest part than any pin, and is at least capable of transmitting one drop of blood in three minutes. The conical cervix is commonly associated with other signs of imperfect development, such as small size of the uterus and unsymmetrical position, from unequal development of the uterine ligaments and rigidity of tissue. It is well known that an imperfectly developed organ is apt to perform its functions with difficulty, and, in the case of a muscular viscus like the uterus, with pain. That ill development is a common cause of dysmenorrhœa is acknowledged by some writers, but is not generally put in sufficient prominence. The following statistics from a paper of Dr. John Williams, already quoted,[3] show this connexion plainly, and also show that, as might be supposed, the younger the age the commoner is ill development. In the presence of a sufficient cause, it is more rational to associate the dysmenorrhœa with general ill development than with special features of that ill development.

Age.	No. examined.	Uterus imperfectly developed.
Under 20	21	15 = 71 per cent.
20 to 25	40	14 = 35 ,,
25 to 30	26	4 = 15 ,,
30 to 35	10	4 = 40 ,,
35 to 40	10	2 = 20 ,,
40 to 45	7	3 = 43 ,,

[1] Obst. Trans., vol. xxiii., p. 210.
[2] Ibid., vol. xxiv., p. 166.
[3] Ibid., 1882, vol. xxiv., p. 121.

The contrast is marked up to the age of thirty in the figures above, afterwards the numbers become too scanty for argument. Vedeler[4] gives details of 252 women who menstruated painlessly (S. 229). Fifteen, or 6 per cent., had some stenosis; some had the "pinhole os." In none of them was there any retention of menses with "painful contractions." Some of these women he examined when menstruating at different times, and found that the canal admitted no larger a bougie when the flow was free than when it was scanty—i.e., it was always large enough to allow the flow to escape. During severe menstrual pain he has passed a large bougie (No. 10) without difficulty during menstruation, and without giving vent to any collection of blood. Some other observers have passed bougies during the height of the pain, and found the canal more relaxed than at any other time. Vedeler also (S. 231) passed a sound during the pain in patients suffering from severe dysmenorrhœal pain before the flow, and not a drop of blood followed, though the pains were "obstructive" in character. The same in some rare cases where the pain continued after the flow. Some years ago I attempted to see whether narrowing of the cervical canal really did cause dysmenorrhœa. I observed sixteen cases. In two of these the os externum would not admit a probe. In four the narrowing affected the canal. In ten the os internum was the part narrowed. Eight had practically painless menstruation (50 per cent.). In one case I can find no note of the pain. The other seven had some pain, but of these one (married nine years and a half) had no pain till five months ago; another, married two years ago, at the age of seventeen, had no pain before marriage; but in this case there was descent of the uterus with retroversion, and prolapse of an ovary. In some cases, where the canal itself was narrowed, the bougie (No. 7) was tightly gripped, showing rigidity as well as narrowing. The test of narrowing was the gripping of No. 7 bougie or the knob of the sound on withdrawal, as already explained. Thus 50 per cent., with or without other complications, had no menstrual pain; while, in the case of many of the rest, there were other possible causes for the pain, and in several it was slight. *b.* Swelling of the mucous membrane: This has not been proved, and, indeed, seems incapable of proof. It appears to have been introduced for the sake of explaining cases of spasmodic dysmenorrhœa, in which there was certainly no conceivable cause of stenosis. Vedeler found (S. 231) in 252 women menstruating painlessly 42 (16 per cent.) cases of cervical endometritis, and remarks that in this condition the orifice is relaxed. He quotes a case in which a sponge tent was inserted in the cervical canal for dysmenorrhœa, and remained there during menstruation, which was painless. *c.* Fibroids: Fibroids are capable of causing severe spasmodic pain apart from any flow irritating the uterine fibre, and there is no necessity to invoke any supposed narrowing of the canal by their means; nor indeed, even if the canal is distorted, is it frequently narrowed. Vedeler (S. 232), among 5800 patients, had three cases of cervical fibroid. In only one was there any dysmenorrhœa. *d.* Polypi: It is not easy to understand how these should cause obstruction; when they begin to descend the canal invariably expands, the uterus goes into labour, and any pain is more rationally explained by this process. As regards mucous polypi, I do not know of a single recorded instance of dysmenorrhœa. *e.* Contortion of cervical canal from hypertrophy: It is not easy to see why a slow trickling cannot take place in a curved canal as well as in a straight one; and, indeed, that this is the case has been directly proved.[5] *f.* Increased flow of blood: The facts are against this. When the flow is free the pain is usually less instead of greater.

C. *Chronic congestion of the uterine organs due to flexion.*—It has been assumed that in flexions of the uterus the circulation must be impeded, and that this is one of the causes of dysmenorrhœa when it is present in such cases. The truth of this position entirely depends on the direction and arrangement of the circulation in the uterus. If this is generally parallel with the long axis, obstruction to the circulation might conceivably result. The facts with regard to this point should properly have been ascertained before the construction of theories; but it was only in 1885 that it was investigated by Dr. John Williams.[6] The blood-supply of the uterus is derived from the uterine and ovarian

[4] Arch. f. Gyn., xxi., 1883, S. 211.
[5] Duncan: Clinical Lecture, fourth edition, 1889, p. 823.
[6] Obst. Trans., vol. xxvii., 1885, p. 112.

arteries, which are joined by a large anastomotic branch at the side of the uterus. From this branches are given off to the uterus, whose general direction is circular and not longitudinal. The veins follow a similar course. As regards the effect of flexions on the uterine circulation, the fundus of the uterus was stitched closely to the cervix, securing the acutest flexion possible; then a coloured fluid was injected into one of the veins of one broad ligament, and the uterus was found to have been well injected. The application of a tight ligature round the uterus would not, with this arrangement of vessels, produce any embarrassment of the circulation except at the part pressed by the ligature, for each part of the uterus is supplied, so to speak, at its own level, as the "rising main" in a house supplies each floor with water. The arrangement of vessels in the uterus is very similar to that in the intestines, which the uteri of many of the lower animals greatly resemble. The intestines are marked by acute flexions every few inches, but no harm to the circulation results from them; in fact the vascular arrangements in both cases are directed to maintaining an equable supply of blood under flexion. There is, therefore, no foundation for the idea that flexion of the uterus embarrasses its circulation. It now remains for me to answer the question: Are flexions essentially associated with dysmenorrhœa? The question whether stenosis is essentially associated with dysmenorrhœa has been discussed above and answered in the negative. 1. Are flexions essentially associated with dysmenorrhœa? This question has been investigated specially by Vedeler of Stockholm and by Dr. Herman. Dr. Vedeler, by the examination of 3012 women, ascertained, first, that 54 per cent. of the whole had anteflexed uteri, 8 per cent. had retroflexion, and 15 per cent. the so-called normal position. Therefore anteflexion is absolutely the commonest position of the uterus; and this holds good whether the patients are virgins, nulliparæ but not virgins, or women who have borne children. In virgins anteflexion was found in 70 per cent., whether suffering from uterine symptoms or not; in nulliparæ, in 71 per cent. of those without and in 56 per cent. of those with uterine symptoms; in women who had borne children, in 37 per cent. of those without and 38 per cent. of those with uterine symptoms. Thus parturition tends to eliminate anteflexion, which still remains absolutely the commonest position of the uterus.[7] Dr. Herman[8] examined 111 women who had never been pregnant and menstruated regularly. He found pronounced anteflexion in 53, or 47·7 per cent. He quotes seven French observers whose cases amount to 431, and whose cases of anteflexion amount to 185, or 42·9 per cent. It is evident, therefore, that anteflexion is for all women the most usual position of the uterus, and that for women who have not borne children it is by far the commonest. This in itself practically shows that it is not to be considered as an abnormal condition. But we still have to deal with the question as to its association with dysmenorrhœa. Vedeler[9] showed the following results of the careful examination of 252 women who menstruated painlessly:—

Denomination.	No.	Uterus strongly flexed.
1. Virgins	59	15 or 22 per cent.
2. Unmarried, not virgins .	101	28 ,, 27 ,,
3. Married	92	13 ,, 13 ,,
	252	56 ,, 22 per cent.

He also gives details of 100 women suffering from dysmenorrhœa. Taking the nulliparæ from his former table of 3012 women, and comparing them with the nulliparæ of the dysmenorrhœal class, the figures come out as follows:—

Nulliparæ (of the 3012)		Dysmenorrhœal nulliparæ.
Anteflexion	71 per cent.	71 per cent.
Retroflexion	3 ,, ...	4 ,,
"Normal position" ...	9 ,, ...	8 ,,
Anteversion	7 ,, ...	6 ,,
Retroversion	9 ,, ...	11 ,,

If only the strongly anteflexed uteri are counted we have the following figures:—In 26 per cent. of the dysmenorrhœal women the uterus was strong anteflexed; among those not suffering from dysmenorrhœa we have acute anteflexion in 20 per cent. of virgins, 27 per cent. of nulliparæ, 13 per cent. of mothers. It is impossible to learn from these figures anything but that anteflexion is not a cause of dysmenorrhœa. Returning to Dr. Herman's 111 nulliparous women menstruating regularly, and who had not sought advice for uterine but for venereal disease at the Lock Hospital, we find the following figures:—1. Uterus straight or slightly anteflexed (57 women): Little or no pain, 40, or 70 per cent.; severe pain, 17, or 29 per cent. 2. Uterus strongly anteflexed (53 women): Little or no pain, 37, or 69 per cent.; severe pain, 16, or 30 per cent. Again:—3. Uterus acutely anteflexed (23 women): Little or no pain, 16, or 69·5 per cent.; severe pain, 7, or 30·4 per cent 4. Uterus straight, or slightly anteflexed (87 women): Little or no pain, 61, or 70·1 per cent.; severe pain, 26, or 29·8 per cent. This shows that anteflexion is not a cause of dysmenorrhœa. As regards *retroflexion*, the question is more complicated, but far less crucial, for retroflexion is far rarer than anteflexion, and could account for very few cases of dysmenorrhœa. Thus Vedeler[10] found only 8 per cent. of retroflexions in 3012 women; or, in detail, in 3 per cent. of virgins, 3 per cent. of nulliparæ not virgins, 12 per cent. of mothers. It is plain that, comparing the 3 per cent. of retroflexions in nulliparæ with the 12 per cent. in mothers, parturition is a fruitful source of retroflexion. But as only 18 per cent. of the cases of dysmenorrhœa occurred in mothers (or, in other words, 82 per cent. in nulliparæ) and as the vast majority of cases of great dysmenorrhœa occur in nulliparæ, the question stands or falls, not by retroflexion, but by anteflexion. Comparing the total 3012 women with the nulliparæ of their number, and with the women suffering from dysmenorrhœa, we have retroflexion occurring in 8 per cent of the total, in 3 per cent. of nulliparæ, and in 4 per cent. of those suffering from dysmenorrhœa. Dr. Herman,[11] in an elaborate and thoughtful paper, discusses the relation between retroflexion and dysmenorrhœa. He finds in 85 cases of retroflexion that menstruation was painless in 21 (24·76 per cent.). The only way in which retroflexion can cause dysmenorrhœa (for the questions of obstruction to the canal, and also to the return of blood by the vessels, have already been considered under anteflexion) is the compression of the vessels in the broad ligaments against the utero-sacral ligaments when the uterus is acutely flexed into Douglas pouch and strangulated (Dr. John Williams).[12] This will lead to congestion of the uterus, and possibly to dysmenorrhœa.

Pathological anteflexion.—Under this name is described a variety of anteflexion, which is not congenital, but acquired, and was first described by Schultze,[13] who attributes it to posterior parametritis, or inflammation of the cellular tissue in the sacro-uterine ligaments, drawing the cervix upwards and backwards, and flexing the uterus forwards. It is not certain whether the thickening is due to inflammation of the peritoneum or of the cellular tissue. Nor does shortening of the sacro-uterine ligaments always lead to anteflexion. It is by no means uncommon to find, in cases of arrested development, the uterus retroverted and irreplaceable, with these ligaments not thickened, but shortened, or rather congenitally short. If the finger be inserted into the rectum, and the ligaments felt, while an attempt is made to replace the uterus with the sound, the ligaments are felt to become tighter and tighter. The difference in the mode of displacement depends probably on differences in the place of insertion of the ligaments as well as in the conditions of tethering of the fundus. I have repeatedly felt thickening of these ligaments in disease of the rectum, and indeed they are as close to the rectum as to the uterus. Vedeler's statistics have been criticised as taking no account of "pathological anteflexion," but it seems to me that this only strengthens his argument. Pathological anteflexion is granted to be a consequence of pelvic inflammation, which is in itself an undoubted cause of dysmenorrhœa. How can it be proved that the anteflexion has anything to do with it? Both the anteflexion and the dysmenorrhœa are common effects of inflammation. Cirrhosis of the liver and delirium tremens are common effects of drink, but cirrhosis of the liver is not a result of delirium tremens. In such a case the *onus probandi* rests with those who uphold the mechanical theory, which in this case is at least quite superfluous. If Vedeler includes cases of pathological anteflexion in discussing its

[7] Arch. f. Gyn., xix., 1882, S. 294.
[8] Obst. Trans., vol. xxii., 1881, p. 209.
[9] Arch. f. Gyn., xxi., 1883, S. 211
[10] Arch. f. Gyn., xix., 1882, S. 295.
[11] Obst. Trans., vol. xxiv., 1883, p. 161.
[12] Obst. Trans., vol. xvi., p. 215.
[13] Arch. f. Gyn., vol. i., S. 373.

effects on dysmenorrhœa, he makes the argument all the worse for the non-mechanical view; and yet see how the figures come out. If these cases were eliminated, the results would certainly be far more damaging even than they are at present.

Arguments from the results of treatment.—It must be remarked that, unless one treatment only is carried out at a time, no argument derived from it can be maintained. For instance, a patient who is kept in bed, has her bowels regularly relieved, and wears a pessary, furnishes no argument in favour of the pessary, unless each step of the treatment is taken separately and with careful noting of its effect. When, in addition to this, a sound is passed frequently to straighten the uterus, we have four simultaneous courses of treatment from which we have no right, without proof, to select any one or two and argue from them. This has, in truth, been very largely done. 1. Postural treatment: This consists in keeping the patient recumbent, in the dorsal position in case of anteflexion, in the prone position in case of retroflexion, with or without the adoption of the genu-pectoral position in addition. The good effects of this treatment are claimed for the reposition of the flexed organ. But it must be remembered that, while exercise, and especially riding on horseback, relieves some cases of dysmenorrhœa, others are relieved by rest in bed. Where is the proof that postural treatment has any other effect than that of rest in bed, with low tension in the bloodvessels? 2. Vaginal pessaries: I am not aware of any recorded observations of cases in which anteflexion having been used, and nothing more done, the pain has been claimed to have been relieved. Even so, my own experience is that a cradle pessary, or any other anteflexion pessary, while it may elevate the uterus *en masse*, leaves the flexion unaltered. Nor, indeed, considering the mechanical effects of such instruments, can I see how they can elevate the fundus without at the same time tightening the anterior vaginal wall and drawing forward the cervix, thus increasing the flexion. In the case of a retroflexion or retroversion, a Hodge's pessary seems sometimes to relieve dysmenorrhœa, but it must be remembered that backward displacements are essentially signs of descent, and that, being very rare in nulliparæ, they are much commoner in those who have borne children. The first effect of a Hodge's pessary is to lift the uterus, and I have often observed cases where the symptoms were relieved, while the uterus, though elevated, was as flexed as ever. The effects of strangulation by the sacro-uterine ligaments have already been referred to; in such cases the good results of a Hodge's pessary are easy to understand. 3. Stem pessaries: The effects of these instruments, where they relieve dysmenorrhœa, are presumed to consist in straightening the uterus and enlarging the canal. It must, however, be remembered that the latter claim brings the treatment under the head of "dilatation," which I shall discuss presently, and which is by no means so simple as it appears. It remains with those who uphold the mechanical view to produce cases which show that the effects of a stem are anything different from those following dilatation. Stems are highly dangerous, and have caused many cases of pelvic inflammation ending fatally. 4. Dilatation: In an interesting chapter of his lectures on Diseases of Women Sir James Simpson gives a summary of the history of this treatment. It appears among the Hippocratic writings as a cure for sterility; in later times it is mentioned by Cook of Warwick (1627), but apparently taken without acknowledgment from a work by Roonhuyse, the inventor of the obstetric lever, as a remedy for dysmenorrhœa. But the practice of dilatation of the cervical canal by a series of metallic sounds is due to Dr. Mackintosh,[14] and the relief afforded in some cases was made by him the foundation for the obstructive theory in all its crudeness. Other means of dilatation are tents and expanding dilators of various kinds, as well as conical dilators. The action of all is the same. Their alleged influence comprises straightening of the uterus, as well as enlargement of the canal. With regard to straightening, we need only say that the uterus remains straight only as long as the bougie remains within it—a fact which may have suggested the wearing of a permanent dilator or stem. No attempt has been made to distinguish between the action of the two; and, indeed, with these words we may dismiss the question of straightening. The facts of dilatation are, however, not so easily summarised, and to understand them we require to study a little the vital properties of the uterus. When in a case of spasmodic dysmenorrhœa a bougie is passed along the canal, if it is so small as not to stretch the canal, little or no pain is felt. As soon, however, as a bougie large enough to stretch the canal is passed along the canal, but not until it passes through the os internum, the dysmenorrhœal pain is at once excited, and remains until time exhausts it, or until it is withdrawn beyond the os internum. One passage of the bougie, or sometimes even of the sound, suffices in some cases to cure, temporarily or permanently, the dysmenorrhœa. Now the size of the bougie, which easily passes, forbids the supposition that the canal is absolutely too small; it is the stretching which both causes the pain and its cure. The question remains, What is the cause of the pain on passing the bougie, what is its relation to the pain of dysmenorrhœa, and what is the cause of its relief? In the *Obstetrical Journal* for 1880 I discussed this question in a paper on Uterine Polarity, taking as the basis of my article a paper by Reil in his *Archiv für Physiologie*,[15] which, with much that is fanciful, is to my mind pregnant with suggestive facts. The vital properties of the uterus include an antagonism between the upper and lower poles, the fundus, and the os internum. In pregnancy the lower pole contracts, the upper expands; in labour the lower pole expands, the upper contracts. Contraction of the upper pole may be excited by expansion of the lower pole. This antagonism is always found when the uterus is working healthily. Instances of its disorder are tetanus of the uterus, trismus, incarceration of the contents, hour-glass contraction, inversion, and after pains, the last of which brings us into close relation with spasmodic dysmenorrhœa. The os internum is not only the lower pole, in antagonism to the upper, but it is the sensitive spot for the uterus, and this sensitiveness is enormously increased in spasmodic dysmenorrhœa. When this spot is stretched the uterus is at once thrown into the characteristic colicky, and often agonising, pains of dysmenorrhœa. The bougie is not removed till the pain ceases, though its passage, if not done under an anæsthetic, may provoke not only agony, but vomiting and fainting. When the pain ceases the uterus is exhausted and can contract spasmodically no longer; its irritability is worn out for the time or altogether; it tolerates the bougie on the principle that familiarity breeds contempt. In the same paper I described a case of dysmenorrhœa with painful micturition. Dilatation of the cervix reproduced the pain felt on micturition, and cured both dysmenorrhœa and dysuria as long as I observed the case. This, again, points strongly to spasm. Cases are recorded by Vedeler and others in which dysmenorrhœa occurred monthly without any flow. It is seen that the mechanical theory fails to explain such cases. 5. Incision: Various forms of incision of the cervix have been practised—division of the os externum, of the os internum, and of the region of the "spur"—with a view to straighten the canal. Division of the os externum, where this is followed by any relief, probably acts by bleeding, followed by rest in bed, for the os externum is certainly not the site of the symptoms in spasmodic dysmenorrhœa. It is possible to keep the wound fairly aseptic in some cases, but the incision may be followed by parametritis or perimetritis. Division of the "spur" with a view of straightening the canal cannot, I think, conceivably leave the canal any straighter than before, and no proof is forthcoming that it does so. If it did, no advantage, as we have shown, would be probable. If it acts beneficially in any cases, it is probably by dividing the os internum, which we shall discuss presently. The wound is at the mercy of chance, so far as septic absorption is concerned. Division of the os internum is a very dangerous proceeding, and has cost many women their lives. It is much less heard of than formerly, partly on this account, partly, perhaps, because the tide of operative fury has left the cervix for the more remote parts of the generative tract, which can only be approached by abdominal incision. It sometimes, undoubtedly, relieved dysmenorrhœa. How did it do so? Probably by dividing the circular fibres round the os internum and setting them at rest from spasm, as division of the sphincter ani sets the muscle at rest and at once relieves the pain. The wound generally united; but meanwhile the uterus had had a period of rest. The above explanation is quite in harmony with what we know of the vital qualities of the uterus.

We have now gone through the whole series of state-

[14] Practice of Physic, 1836.

[15] Band vii., Heft. 3, S. 415, 1807.

ments in favour of the mechanical theory of dysmenorrhœa, and have found that most of them are at variance with facts as ascertained, while many of them are founded on interpretations which are capable of being reviewed from another side, and are most probably erroneous. It seems to me that had the facts as regards flexions, stenosis, and the uterine circulation been ascertained before propounding a theory, the mechanical theory of dysmenorrhœa could never have been propounded. To ascertain the facts that have now rendered it untenable has been the work of years; but this is not the only instance in medicine of the labour entailed on innocent persons by the promulgation of a theory on insufficient grounds. Some of the most important work has appeared in the *Archiv für Gynäkologie*, but it is curious to read, even quite recently, the utterances of Germans, who cannot be ignorant of Vedeler's papers, as if the facts were still debatable, or as if they had appeared abroad instead of in the principal place of resort for such papers in the whole of German current literature. I am inclined to think that, in matters of science, Englishmen live less on an island than other people. I trust that in the above remarks I shall not be interpreted as questioning the good faith of the theorists, but only as criticising their scientific methods. It is true that no theory can be developed without the aid of the imagination, but all ideas should be kept in limbo until they have been subjected to the severest criticism by their parents. It is also true that what is true is generally simple; but the converse—what is simple is generally true—by no means holds; and the mechanical theory seems to me to be an instance of such logic.

It remains to state what I believe to be the truth as regards the pathology of spasmodic dysmenorrhœa. Let us marshal our facts. Spasmodic dysmenorrhœa is pre-eminently an affection of the immature uterus. The pain is certainly colic; it often preceeds the flow, and sometimes occurs regularly without any flow at all. Its intensity varies inversely to the abundance of the flow. It is often associated with nervous phenomena in other parts of the body, especially neuralgic headaches. It is essentially a neurosis, and has motor phenomena (colic) and vaso-motor phenomena (scanty or greatly varying flow); some would go further, and add secretory phenomena, such as catarrh, and quote the analogy of asthma. But, while spasmodic asthma undoubtedly has points of resemblance with dysmenorrhœa, the question of secretion, in our present knowledge of the monthly changes in the uterus, cannot be pressed. The association of spasmodic dysmenorrhœa with sterility cannot be one of mere dimensions; for if, as we have seen, the smallest cervical canal can transmit the menstrual fluid without sensible hindrance, much more can it admit the microscopical spermatozoa. The association of pain with sterility and their simultaneous disappearance points, in my opinion, to a vital and not an arithmetical solution. The rare cases in which, during the sexual orgasm, spontaneous changes have been observed in the cervix uteri, coupled with other phenomena, which have been so elaborately and scientifically discussed by the late Dr. Matthews Duncan in his Gulstonian Lectures on Sterility, throw light on this difficult subject, and make it probable that the peristaltic movements of the uterus, implied in what Reil calls "polarity," have functions connected not only with menstruation, but also with impregnation. Lastly, the remedies for spasmodic dysmenorrhœa throw some light on its nature. The relief produced by encouraging the flow, as by hot footbaths, tells in favour of vaso-motor spasm, and strongly against the mechanical theory. If that were correct, the increase in the flow would make the escape of the fluid many times more difficult and more painful; but the facts are just the other way. Such drugs as castor (an old remedy lately revived and left as a legacy by the thoughtful and trustworthy Litzmann), antipyrin, and nitro-glycerine tell the same tale, and so do so-called diffusible stimulants, especially gin. Of course, opium will drown the pain, but the action of the above drugs is not narcotic. Ergot acts by producing tonic contraction and stopping the colicky contractions. Its action here is the same as in after-pains. The *rationale* of the treatment by dilatation has already been discussed. The os internum is the sensitive point for the uterus. By stretching this, years of dysmenorrhœal agony are concentrated into a few minutes; the irritability of the uterus is exhausted; it rests, and has a chance of starting afresh—a chance it may or may not accept. The division of the os internum acts in a similar way to the division of other parts in a condition of painful spasm by setting the irritated fibres at rest. It must, however, be remembered that uterine colic is not associated with spasmodic contraction of the os internum, though it may be associated with a condition of tetanus without narrowing of the canal, as in after-pains. The great remedy is pregnancy and parturition—a remedy not within the reach of all; for we must remember that sterile marriage increases the pain. Still, the association of dysmenorrhœa with sterility in a married woman gives us a fair hope that, in the absence of any discoverable impediment, the cure of the dysmenorrhœa may be followed by that of the sterility. We must, however, bear in mind that the vast majority of the causes of sterility are beyond our discovery, and still more beyond our control. This subject is the last on which a man has any right to entertain crude and mathematical notions, the problem being of the greatest complexity and of the utmost delicacy.

Treatment.—It will be impossible to do more than indicate principles of treatment. These comprise treatment between and during the periods. In the first place comes the question of general mode of life. Generally speaking, this should not be too sedentary. Plenty of healthy exercise, and especially riding, will promote the circulation through the pelvis, and give the generative organs a better chance of developing. In the same connexion must be mentioned the maintenance of the regular action of the bowels by laxatives, and particularly salines. This has the same purpose: to avoid stagnation of blood in the pelvis. It is probable that of all drugs in the treatment of chronic pelvic disorders, Epsom salts are the most valuable. Indeed, with constipation, none of this class improve, even if treated by the newest alkaloids. The diet should be simple and wholesome; in fact, the patient should go into a sort of gentle training. During the pain most patients are better at rest, or even in bed; but some find their pain relieved by exercise, even unusually active. Pessaries (except the Hodge's pessary in a few cases of descent with retroflexion, and except the stem pessaries) are, I believe, absolutely useless. The stem pessaries are not always useless, but are dangerous, and should not be used. Incision of the os externum is, I believe, useless; incision of the os internum is not always useless, but is highly dangerous. Among drugs, guaiacum, with or without sulphur, is sometimes useful, taken regularly in milk as a powder, or as a confection. Castoreum sometimes abolishes the spasm completely. I have known cases treated by nearly, if not quite, all the usual drugs unsuccessfully get well suddenly as soon as castoreum was given. It is best given in the form of tincture, from twenty to thirty drops three or four times daily during the pain, with or without a few drops of tincture of nux vomica. A hot foot bath, and a good glass of hot gin-and-water at bedtime, at the beginning of the pain, is an old and valuable remedy. It probably acts by relaxing the vaso-motor and muscular spasm. The gin should be given once a month only. Ergot is sometimes useful by causing tonic contraction, and stopping what Reil would call the irregular, fibrillar, streaky, non-peristaltic uterine contractions. Dilatation is the last resort. It is generally contraindicated in the presence of inflammatory signs in the pelvis, even if old. It must be carried out with all antiseptic precautions, and is not, in my opinion, so trivial a proceeding as to be safely done in the consulting-room. The pain also is often agonising, and is far greater than that caused by some operations for which anæsthetics are habitually given. For these reasons I prefer to perform dilatation at one sitting under anæsthesia, and with full antiseptic precautions, after ascertaining that the genuine dysmenorrhœal pain is evoked by dilatation of the os internum, a point which greatly improves the prognosis. Nothing can be promised, for dilatation may give temporary relief, permanent relief, or no relief at all. Still, considering the slight risk, I use it rather freely, for there are cases which seem most unpromising, and yet are cured by it. I remember one such case, a patient who had suffered for years, had had many treatments, including division of the cervix, which was followed by perimetritis, completely matting the posterior part of the pelvis. The pain was not only menstrual, but almost continuous. Her medical man in the west of England sent her to me to see what I could do for her. In spite of the very unfavourable conditions I dilated her cervix, and she lost from that time

both menstrual and inter-menstrual pain. Her medical man wrote to me some time later to suggest that as she was so much better he might dilate the cervix again. I advised him to let well alone, and he took my advice. The best time is about midway between the periods. Hegar's dilators do very well, or we can use the metallic bougies. The dilatation should not be pressed when great resistance is felt, or the cervix may be lacerated, even with fatal result. The object is not to enlarge, but to stretch the canal. But this stretching is generally not satisfactory unless the largest bougie varies from the size of a cedar pencil to that of the tip of the little finger. Two- or three-bladed dilators are bad instruments; they stretch the canal unequally, and are liable to tear it. They are out of fashion in England, though not apparently in America and on the Continent.

A word must be said in conclusion on the ethics of the subject. The patients are often young unmarried women. In such, unless the health is seriously suffering, we should try to dispense with a local examination, and, if it is necessary, make it by the rectum, at least in the first instance. By this route a practitioner used to pelvic examination will be able to make a very good exploration of the pelvis, unless the patient is rigid, which would equally prejudice a vaginal examination. To make the first vaginal examination in a young virgin may occasionally be necessary, but it is most unpleasant. It is not to be done without a due feeling of necessity. To illustrate a mode of practice as far as possible removed from that which would be generally approved by English gentlemen, I will summarise the treatment recommended and habitually practised by the writer of a recent article. The patient is a girl of seventeen. After general treatment has been tried and failed, hot vaginal douches are given for some days before each menstruation. If this is of no avail a vaginal examination is made, and the vagina thoroughly stretched under ether to facilitate further manipulations. This is followed by the insertion of medicated tampons twice a week, to enable the practitioner to move the uterus freely. Then the sound is passed and the tampons are resumed for two or three weeks, or even from six to eight weeks. This is followed by dilatation of the cervix, repeated two or three times between two periods. When the uterus is small electricity is used, and persisted in till the uterus develops. I cannot do justice to such advice, and can only express my opinion that all the dysmenorrhœa endured by "suffering woman" since the foundation of the world is preferable to such treatment, even if scientifically correct, instead of being, as I have endeavoured to show, founded on unsupported theory and on false logic. Lastly, I would say it seems to me that the profession ought to make up its mind on the subject of dysmenorrhœa. I have endeavoured to state the facts plainly, and I have given references to enable those who doubt to read for themselves. We do not take a worthy position if we talk cynically of different schools or sets of opinions. We are not living in days when the facts of anatomy were stated on the authority of Hippocrates or Galen, but in days when verification is possible for most if not for all. Opinions and creeds matter only to their owners as long as they remain merely opinions and creeds, but when transformed into action they become serious. The local treatment of diseases of women is only justifiable when it is necessary. Whether it is necessary or not, or what is necessary, depends upon the question whether this view or that view is correct. Let the subject be our sister, our wife, or our daughter, and we at once see that it is of the utmost importance that those who are to treat them should be correctly informed. When the matter stands so that more recent investigation shows or claims to show that older theories entailing a great amount of local treatment are erroneous, it seems to me incumbent on English gentlemen to do their best to find out what the facts really are. It has been with a view to making this course easier that I have ventured to address you on the subject of painful menstruation.

SOCIETY FOR THE STUDY OF INEBRIETY.—At the quarterly meeting to be held in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, W., on Jan. 6th, 1891, at four o'clock, the President, Dr. Norman Kerr, in the chair, Dr. J. A. H. Crespi will speak on "Inebriety and its Treatment," and Dr. T. L. Wright (Bellefontaine, Ohio) on "Drunkenness, its Psychology and Responsibility."

ABSTRACT OF A

Lecture

ON THE "RECURRENCE" OF CANCER; AND ITS PREVENTION.

Delivered at the Cancer Hospital on Feb. 28th, 1890,

BY HERBERT SNOW, M.D. LOND., &c.,
SURGEON TO THE HOSPITAL.

THE word "cancer" is a popular and convenient synonym for "malignant disease," and is here employed, as a generic term, in that sense. General conceptions of cancer etiology have been in the past—and still remain to some extent—tinged by the familiar phenomena of mammary malignant disease (principally scirrhus). Theories assigning to this class of neoplasms a constitutional origin, and mainly based upon the phenomena in question, are favoured by (*a*) the acute course of certain exceptional cases and varieties (e.g., periosteal sarcoma), their rapid and wide dissemination from the primary source; (*b*) the general blood infection, which is apparent in the later stages of many or most malignant growths (e.g., mammary scirrhus); (*c*) the neurotic origin of numerous cases, particularly when the female sexual organs are first attacked; (*d*) the latent and insidious deposits in the marrow of bones, which occur especially in breast scirrhus, and which account for the occasional "recurrence" of this disease, after a long interval of seeming immunity; (*e*) the ill success of operative measures, and frequent reappearance of the disease subsequently; (*f*) a supposed hereditary predisposition. They are negatived mainly by clinical experience, which shows every case of malignant disease to originate in a single more or less limited area of tissue, and to be subsequently disseminated mechanically by cells or by minute protoplasmic particles thence derived. The infection takes place along certain paths which (in the early stages) are tolerably definite and capable of being predicted. [The phenomena of melanotic sarcoma, as one of the most malignant of the class, were appealed to in illustration, and cases cited which proved extensive dissemination to have originated from a minute primary focus.]

Additional considerations in favour of regarding malignant neoplasms as lesions strictly local at the commencement are to be found in the facts that two simultaneous cancer developments in different parts of the body (or even of the same organ) appear to be unknown; and that no trace of heredity can be detected in the majority of instances. [The hypertrophied sternum or humerus found after many breast excisions for scirrhus were indicated as symptoms of latent infection, accounting for certain obscure cases of "long recurrence"; and the normal cyclic desquamative changes in the uterus pointed out as important histological modifications, purely local to outward appearance, yet dependent upon central nerve control, and intimately associated with emotional states.] The designation "recurrence" is therefore but a misnomer—the phenomenon really consisting of a reappearance of malignant cells, nuclei, or nuclear particles, residual after seeming extirpation. Ordinarily the palpable tumour is but a part of the diseased area, being when unencapsuled surrounded by infected tissues, which may not evince any discernible pathological alteration. The great aim in the surgical treatment of malignant disease should be complete extirpation of the whole primary deposit before any secondary infection has had time to ensue. The most essential point towards securing that early diagnosis, which alone would render such an object feasible, is recognition of the general and local conditions specially liable to result in cancerous disease.

Of these, protracted *mental distress* is the most important. In malignant affections of the breast and uterus (which constitute so large a proportion of the total cases), it commonly appears as the sole immediate antecedent. In all varieties it seems to predispose, although when other localities are attacked, a mechanical exciting cause is, on careful inquiry, usually to be traced in addition. Primary cancer of lymph-glands (lympho-sarcoma) almost invariably escapes diagnosis until practical measures of extirpation are useless. Better results would without doubt be secured

were the individuals likely to suffer from malignant disease promptly recognised (in this, as in other instances) as thus predisposed. In the youthful, simple lymphoma is a common complaint; in the old it is rare, and very seldom seen without some obvious septic causation, such as diphtheria. In the middle-aged or elderly, lymph gland enlargement taking place without this or some similar causation history, is *per se* most probably malignant; if, in addition, there is an account of injury and of troubles, the probability will be greatly enhanced. In any such case, doubt should be promptly cleared up by exploratory incision before further glands in the chain become infected—a process which takes place with considerable rapidity. Again, early resort to a vaginal examination would often prove of the utmost advantage in women with uterine symptoms, long exposed to mental trouble or to some similar agent productive of debility and exhaustion, who might therefore with reason be regarded as predisposed to malignant disease. With such persons seeking advice for tumour formation in the mamma, no time should be lost in the harmless procedure of an exploratory incision under anæsthesia.

In the case of these breast tumours, the age of thirty-eight is a rough but useful practical guide. Any growth discovered long before that period of life is almost certainly non-malignant. At that date, and subsequently, there is strong *a priori* presumption in favour of malignancy, whether of connective tissue or of epitheloid origin. And even primarily non-malignant breast neoplasms are prone (after that limit of age) to develop cancerous phenomena. Although less conspicuous in other localities, the predisposing influence of age endows any tumour formation in persons past the period of youth with grave suspicion. In respect of the projected removal of a primary cancerous growth each individual case requires careful consideration and adjustment of details. Thus the variety of neoplasm, its locality, its duration, and stage of apparent development, its proneness to infect certain tissues, and to be restrained by others, &c., need judicial estimation and due allowance. The special liability of the skin and subcutaneous tissue to receive contagion, to serve as vehicles for dissemination, and as media for future recurrence, are of eminent practical importance. On the other hand, dense fasciæ and non-vascular fibrous structures (such as cicatricial tissue) more or less inhibit cancer growth.

In regard of the lymph-gland path, by which the secondary infection characterising certain prevalent varieties ordinarily proceeds, it is judicious to assume the fact of lymph-gland infection under such circumstances, whether there exist physical signs of that occurrence or not. Tenderness and marked increase in bulk are comparatively *late* indications of cancer growth in these organs. Unless the particular chain of lymph glands certain to receive the infective particles in each instance be removed simultaneously with the primary deposit, subsequent manifestations of "recurrent growth" will generally be assured. It is therefore necessary to extirpate those lymph glands most prone to receive contagion in each instance, whether palpably diseased or not. These are in mammary scirrhus the axillary; the same in epithelioma, melanotic sarcoma, &c., attacking the upper extremity; in like disease of the lower extremity, the superficial inguinal glands, including those about the saphenous opening; in epithelioma of the anal margin or external genital organs, the same; in epithelioma of the anterior parts of the tongue or mouth cavity, the lymph glands under the lower jaw on the same side, in contact with the submaxillary; in epithelioma commencing at the root of the tongue, or in its immediate vicinity, the deep cervical glands in contact with the large blood-vessels.

In malignant disease not prone to infect the lymph glands with rapidity, or in which the removal of those organs would be attended with risk, it is not requisite to remove the adjoining lymph glands simultaneously with the primary tumour or infiltration, unless they betray symptoms of infection. But for several months subsequently close attention to the condition of these "breakers ahead" must be maintained. In melanotic sarcoma especially (often also in other varieties) it is the secondary deposits which ordinarily prove fatal, the primary lesion remaining to the end trivial and unimportant.

The following rules for the extirpation of breast scirrhus (as typical of infiltrating cancerous growths in general) were formulated: 1. The palpable tumour occupies but a portion of the tissues actually diseased; it is necessary, therefore, always to extirpate a wide margin of the seemingly healthy parts, apportioning the amount excised to the requirements of each individual case (its duration, rapidity of progress, situation, &c.). 2. An instance is very rarely encountered in which infection of the near axillary lymph glands has not already taken place, although physical signs of the occurrence may be wholly wanting. The contents of the axilla should in every case therefore be removed, as a routine rule of practice, especially as the palliative benefits conferred by that measure (in the event of "recurrence") are ordinarily far greater than those derived from a simple excision of the mamma. 3. Unless the growth is very minute and recent, the whole parenchyma should be removed. 4. Whenever the skin is implicated, or the disease approaches the surface, a much larger portion of that structure should be excised than would otherwise be needful. 5. It is important to carry the incisions *vertically* down to the underlying fascia. If, subsequently to the first cuts through the skin, the parts are severed obliquely, infected spots are liable to escape. 6. The first incision should always be made the nearer of the two to the seat of disease (when this is a central), and should accurately sever all the tissues most prone to infection by "contiguity." 7. Union by first intention is an object of but trivial consequence in comparison with that of complete eradication, and if the case appears to require it the former aim should always be sacrificed to the latter. 8. Before the operation is terminated it is essential to search carefully for any outlying axillary glands, portions of mammary parenchyma, or malignant nodules which may have escaped removal. In particular, the chain of minute lymph glands (hardly discernible unless enlarged by disease) in the fascia on the under surface of the muscles require attention, as also the wedge of breast tissue occasionally prolonged into the axilla over and around the edge of the pectoralis major. 9. The patient must subsequently be kept under periodic observation for the term of two years, and any "recurrent" nodule or other suspicious appearance promptly removed before this has had time to serve as a medium for further diffusion.

NOTES ON

THE RECENT EPIDEMIC OF PNEUMONIA IN SHEFFIELD.[1]

BY CHARLES NELSON GWYNNE, B.A., M.D., &c.,
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I THINK, *in limine*, I may assume the fact of the existence of an epidemic of pneumonia in Sheffield during the first half of the present year, and that it was intimately connected with the influenza epidemic that ran its course at the same time. In this statement I am borne out by the experience of the medical profession in the town and the remarkable increase in the death-rate from this cause during the time specified. Although the researches of Fraenkel have made it appear probable that pneumonia is dependent upon the presence of a special diplococcus in many instances, yet it is equally probable—and, indeed, we have on this point the authority of Weichselbaum—that many different forms of bacteria can produce the disease. Arguing from such a basis and considering the very intimate relationship that subsisted between the influenza epidemic and the cases of pneumonia that occurred at the same time, I think it is very probable that both these diseases depended upon the presence of the same micro-organism. This unusual exciting cause would also account for the many unusual symptoms that the cases of pneumonia presented during the epidemic, forming in a large number of cases a marked contrast to the accepted classical type of the disease. These points of difference are so remarkable, that I have thought them worthy of being made the subject of a special communication. Most medical men who have had experience of influenza will allow that the most universally prominent symptom was the profound nervous prostration that was present in all the severe cases. As a result the vascular system was markedly impressed, the breathing was rapid, precordial anxiety was frequent, and a tendency to blood stasis was established, resulting often in epistaxis and often in pul-

[1] Abstract of a paper read before the Sheffield Medico-Chirurgical Society, Oct. 23rd, 1890.

monary congestion. Now this lowered nervous energy and accompanying vascular depression was the very condition of the body that favoured the invasion of pneumonia, whether dependent upon exposure to cold, or to the direct invasion of the bacilli of influenza. This same condition of lowered vitality, I believe, accounts for the large number of cases which assumed from the first a typhoid character, many patients succumbing to the disease within the first six days. A brief history of four cases, all occurring about the same time, during the height of the epidemic, will illustrate this point.

CASE 1.—J. B——, aged thirty-nine, married, a joiner, had been suffering for some days from symptoms of influenza. On Feb. 6th he came home feeling very ill and having had shivering attacks. During the night he had an epileptic seizure. The next day his temperature was 102°, pulse 116, and respiration 62. The following day he was much worse, had muttering delirium, his tongue was dry and brown, and he sank rapidly, dying on Feb. 11th. Here the whole posterior aspect of the right lung was dull, there were extensively distributed bronchial râles all over the chest, and the expectoration was markedly sanguineous.

CASE 2.—This case was similar in character to Case 1. Mrs. R——, aged sixty, of good physique and previously healthy, was taken ill on Feb. 17th. On the 19th I was called in. She was in a prostrate condition, her tongue was dry and brown, her breathing rapid and shallow. The right lung, back and front, was dull, moist râles were heard all over the chest, and there was some, and had been considerable, blood-stained expectoration. She never rallied, and died on Feb. 22nd, the fifth day of her illness.

CASE 3.—On March 20th I was called to see E. S——, a middle-aged man, habitually intemperate. He had his initial rigor the previous day. When seen, his temperature was 104·5°, pulse 140, respiration 36. He sank rapidly, and died two days after with muttering delirium and profuse sweating. The right lung, back and front, was dull throughout.

CASE 4.—This case was that of a man, J. F——, aged twenty-nine, of fine physique, but very stout, weighing 16 st. He was abstemious in his habits and temperate. He got his first chill on March 21st. He had troublesome cough and much expectoration of sanguineous phlegm. Pneumonic crepitus was extensively heard all over the left lung, and moist râles diffused all over the chest. The following day his temperature was 102·6°, pulse 122, respiration 36. His countenance wore an anxious look, and his complexion was cyanotic. Towards evening he raved much. During the next three days his temperature varied from 100·2° to 101·2°; his respiration remained usually at 40, but his pulse rose gradually from 130 till (on the 27th) it was nearly 150, his temperature on the evening of that day rising to 104·6°. About 8 P.M. he died. Towards the end there was profuse sweating, and during the last two days there was some pericarditis. His tongue all through his illness was hard and brown down the middle, with cream-coloured borders.

Such cases as the above were unfortunately common during the height of the influenza epidemic, and bear out my remarks as to the very low standard of vitality that was characteristic of that epidemic. Another very remarkable circumstance, exemplifying the general tendency towards pneumonia at this period, is the very great frequency with which, while attending a patient for influenza, I have discovered a small patch of pneumonia generally about the base which did not seem to produce any marked general symptoms, and which generally quite cleared up in a few days. Several cases of this class I have notes of. But while these cases were frequent enough, there was another class, fortunately not nearly so numerous, but vastly more serious. I allude to cases where there has been undoubted pneumonia, but from the very first assuming a subacute form, the temperature rising rarely above 102° and generally not much above 100° or 101°. Of these cases I have very careful notes, showing their very protracted course and generally unsatisfactory results. Many of these patients I could with difficulty keep in bed; they had no troublesome symptoms in many instances, but there remained obstinately a dull patch of pneumonia, occupying generally the base, but not unfrequently the apex, and which would not resolve. One case of this sort, commencing with pneumonia of the right base, ran a long and weary course and terminated some months later in phthisis. Another commencing with extensive dulness of the anterior portion of the right middle lobe, with expectoration of bloody sputum, but with only from one to two degrees of fever, after a lengthened illness, during which the entire right lung became involved, eventuated in abscess, and is still under treatment.

Cases, relatively so numerous, point to a species of pneumonia distinct from the classical type, and which, for want of a better name, I would call "influenza pneumonia." Again, I would direct attention to the unusual tendency towards complications which marked all the cases of pneumonia during this period. Amongst these, all occurring in private practice, I find the following complications, parotiditis, phlebitis of femoral vein, pericarditis, pleurisy, and abscess. I would also direct attention to the character of the sputum, which has been more sanguineous than typical pneumonic sputum. This I have noticed just as often in cases of a subacute type, and it seems to be dependent upon an unusual degree of pulmonary congestion. On the question of the infectiousness of epidemic pneumonia I have little to say. My experience of the late epidemic points out only two cases where the occurrence of the disease could be in this way explained, but the evidence of infection in both these cases was undoubtedly strong. On Feb. 22nd a patient died of a peculiarly malignant type of pneumonia, and on the same day her son-in-law, who lived next door, and was frequently in and out of her house, got his initial rigor, which was followed by a severe attack of pneumonia. Again, in a house in Meersbrook a woman lay sick with pneumonia, and her life was for a time in great danger. During her illness a lodger who occupied a bedroom next to hers was attacked with pneumonia, from which he died after an illness that lasted over six days.

There is just one other point which I should like to mention in connexion with the epidemic in question, and that is the comparative immunity enjoyed by children up to about twelve years of age. I can only explain this by their similar immunity from, at all events, severe attacks of influenza.

Sheffield.

PERSISTENT DANDRUFF, ACNE, AND THE SEBORRHŒA OF UNNA.

BY EDWARD BLAKE, M.D.

PART I.—PERSISTENT DANDRUFF AND THE SEBORRHŒA OF UNNA.

BEFORE leaving town for my usual summer holiday I observed in the correspondence columns of THE LANCET a request for a cure of obstinate dandruff. If your correspondent should chance to see this somewhat tardy reply, it may interest him to hear that some months ago I was made acquainted with a method of meeting this troublesome disease by a medical friend, Dr. Shuldham. I must admit that the plan has proved to be a remarkably successful one. Cases which had been running a tedious course of years' duration untouched by ordinary treatment have, provided the heart action be good, shown marked improvement ere a week has elapsed, and have soon after reported a cure. This question of dandruff is not quite so simple as we might suppose. Its natural history, whilst full of interest, is really very complex. There is still a great deal to be learned as to the precise pathology of various forms of dandruff; on the other hand, the researches of Unna of Hamburg have thrown a large amount of light on the subject, and have at least taught us how much there is still to be known about this much-neglected disorder. To Unna, I believe, belongs the credit of first pointing out that dandruff is essentially parasitic, and therefore contagious. This has been confirmed in the fullest manner by excellent clinical evidence. There seems to be little room for doubt that scurf does not usually appear spontaneously, that it is conveyed from a definite source. The hairdresser's brush and the toilet accessories of hotels, clubs, &c., are probably frequent offenders amongst men. With the other sex a possible method of convection is as follows: A maid-servant uses her mistress's hair brush, and after a certain lapse of time the lady's scalp begins to itch, especially along the line of parting. From the mother it does not take long to spread to the children. It is possible that a microphyte may actually enter the sebaceous follicle belonging to a hair-sheath, setting up the severe irritation and its accompanying phenomena, to which Unna has given

the name of "seborrhœa." But the following course appears to be more probable. A given person labours under a certain dyscrasia, often associated with an indolent heart action. In this state the sebum thickens from a fluid oil to a solid fat, as it does in acne. The orifice of the follicle becomes blocked with this fat and with accumulated epithelial cell débris. An appropriate nidus is thus formed for the retention and elaboration of the microspore, the clinical sign of its nidation and development being intense itching. The sebaceous secretion from this time grows more and more dense and consistent. Degenerated epithelium cells are proliferated with great freedom, and at last the formation of sebum is altogether abolished. After this three sequent phenomena may be recognised: 1. The hair grows dry, harsh, and brittle, owing to the arrest of secretion of the normal sebaceous material. 2 The copious production of epithelial scales in and near the mouth of the sebaceous duct leads to great accumulation round the hair, which, compressed and strangled, soon breaks off. The third and last process is as follows. Vast accumulations of imperfectly formed and badly elaborated epithelium scales, having first filled the cavity of the root sheath, begin to protrude from it in the form of a domed hillock, brownish-grey in colour. These can be readily detected in advanced cases by the unaided eye. These camel-coloured hillocks are formed of diseased epithelium scales, loosely held together. When scattered by the nail, applied to relieve the itching, or by the hair brush, they form the bran-like material commonly called "scurf." These scales may themselves be the carriers of contagion. We often find them spread over much larger geographic areas amongst the gentle than we do with the simple. Among ladies they are soon removed and freely disseminated by diligent brushing. I have seen them deposited on the outer portion of the eyebrow, and it may occasionally be seen that the hair of that part has perished. The intermammary region is a very common site. Again, they are sometimes arrested in their downward course by the prominent upper portion of the breast, where the crescent of brown patches which they give rise to may be mistaken for pityriasis or for chloasma. This condition is sometions called "lichen circumscriptus." The brown spots are frequently seen on the shoulders and in the interscapular area. Many gaps in the minute pathology of this much-neglected disease remain to be filled up, but enough has been said to show that there is no royal road to the cure of dandruff. To be able to cope successfully with this complaint it is needful to study its natural history. Dr. Shuldham's treatment is as follows: The head should be first well washed with hot water and alcohol soap. Alcohol soap consists of two ounces of pure soft soap, half an ounce of rectified spirit of wine, and ten minims of oil of lavender. This formula seems simple enough, but it is very difficult to get this soap properly prepared. One reason for this is that a large amount of cotton oil is now introduced into this country, and sold with the addition of a little olive oil as "best Lucca." The soap is afterwards carefully washed away with plenty of hot water, and the head is then thoroughly dried by means of a warm soft cloth. When the head is quite dry, a glycerole of tannin, strength from ten to thirty grains to the ounce, according to the gravity of the case, should be freely and firmly rubbed into the scalp. If tannin fail, resorcin may be tried, but the tannic acid generally does the work. This process should be repeated once, twice, or thrice a week, as the symptoms may require. After the total removal of the dandruff, a daily dressing with carbolic oil favours the growth of fresh hair: ten grains of absolute phenol, one drachm of oil of cinnamon, and one ounce of olive oil. Warm together and decant off. Apply freely every day.

PART II.—ACNE, AND ITS RELATIONS WITH INTRACTABLE DANDRUFF.

I come now to a matter of extreme interest; it is the method of removing recurrent acne pustulosa—a confessedly obstinate, and certainly a most disfiguring, disease. I have shown that scurf may be an acquired disease of contagious character. Though we might have a suspicion that the parasitic pathology of the new Hamburg school may greatly modify, even if it fail to revolutionise, modern cutaneous medicine, yet the whole matter to many of us retains some of the characters of a startling novelty. It has not hitherto, as far as I can ascertain, been thought that any clinical relationship could exist between scurf and pustular acne. Yet there seems to be some ground for suspecting such a connexion, as I shall presently seek to show, by giving the history of two exceedingly suggestive cases which I have been recently watching, and whose details I will briefly narrate.

CASE 1.—I had treated for two years a lady aged thirty-five for recurrent acne pustulosa of the back. She was a tractable patient, and submitted loyally to strict diet rules. All the pustular remedies that I had ever heard of were given, and the result was "a brilliant failure." I called to my aid a distinguished skin specialist, and followed his directions scrupulously; but, alas! with an equally unsatisfactory result. At this stage, acting on the advice of Dr. Shuldham, without any reference to the acne, but with a view to removing a dandruff which threatened baldness, I applied alcohol soap, followed by glycerole of tannin. The result was most instructive to me. With two applications per week the scurf, which was a very old business, soon disappeared, and to my great surprise the dorsal pustular acne went with it.

CASE 2.—Soon after this a physician of forty-eight years of age consulted me as to whether anything could be done for his baldness. He stated that he did not see why he should have alopecia, as his family did not become bald even in advanced life. Dr. Shuldham kindly examined him with me. We found the scalp freely movable. Hair, otherwise healthy, was very thin along the parting. There was a history of intense itching in that locality five years ago, and after that the baldness began to set in. This irritation subsided under the use of carbolic oil, but the hair was not reproduced. He continued to use the phenol oleate, as without it so much scurf was generated. His back was decorated with pustular acne and with a great number of scars of former spots (acne indurata). He volunteered the information that four days' indulgence in fat ham would always be followed by a pustule on the face. This apparently unimportant observation as to the relation between acne and the absorption of a carbo-hydrate undergoing a slow process of oxidation supplies, as presently will be seen, a very important link in the evidence for elucidating the life-history of acne pustulosa. A form of treatment was adopted in this case resembling that employed in Case 1, and with similar satisfactory results. The scurf disappeared, and with it went the acne pustulosa of thirty years' duration. This was without internal treatment in either case.

Now, let us ask, what was common to these two cases, and what was the *rationale* of their cure? In both there was old existing seborrhœa, dating probably from puberty. This catarrhal condition of the sebaceous follicles of the scalp affords an appropriate nidus or supplies suitable soil for the micrococcus or the microphyte which induces dandruff. The methods of growth and of distribution have been already considered. The dandruff is distributed by the comb, the brush, and the finger-nail, carrying with it the peculiar causative microphyte. Where it encounters the oily or viscid material oozing from a sebaceous follicle about to pass into the comedone stage it is mechanically detained, and if not disturbed by hot ablutions, by vigorous towelling, or by the manœuvres of the Turkish bath, it sets up a specific irritation known as acne papulosa. It through the presence of bacteria the sebum decompose and break up into a variety of volatile principles and of fatty acids, some of these being possessed of a horribly fetid odour, the resorption of these acts, like the butyric and other acids of the ham fat, by inducing suppuration or local sphacelus with a development of the usual staphylococci, streptococci, and allied organisms found in abscesses. Papular acne is most common, as pointed out by Dr. Frank Payne,[1] on the parts formerly endowed with hair, but now, possibly through evolutionary changes, bereft of it. It is found, as I have myself observed, on the fixed points of the skin, whilst it is rarer on the mobile portions. It is unknown under the chin, and this is especially noteworthy, for that region is protected by the projecting jaw from the impact of scurf scales descending from the hairy scalp. It is an old clinical observation that fat introduced into a stomach deficient in vitality is prone to produce the exciting cause of pustular acne. For example, it follows, in certain people, indulgence in rich pastry and old cheese. That the disturbing element is an acid seems likely from the great success that sometimes follows the use of free doses of the alkaline salts. We know that other

[1] See an admirable post-graduate lecture on Acne, a résumé of which may be found in THE LANCET of Feb. 15th, 1890, at p. 339.

carbo-hydrates, besides those already named, are credited with the power of setting up acne of the pustular type. Among these, the commonest are malt liquor and sugar, especially when their ingestion does not follow out-door exercise. With regard to the malt liquors, there is of course another possible explanation of the occurrence of acne. It is the introduction of sulphur and its compounds. There are at least three methods by which sulphur may be introduced into beer. The hops are dried whilst exposed to the fumes of nascent sulphurous acid; barrels are washed with calcium sulphide to freshen them, and the best beer-making waters, as those of Burton, are rich in the same salt. As we have to deal with two contributory causes of acne pustulosa, seborrhœa as a predisposing and scurf as an exciting cause, the question arises, Shall we attack these (*a*) in their chronological order, (*b*) together, or (*c*) in reverse order? The practical rule appears to be to destroy the dandruff first, then see to the seborrhœa. Acne punctata may be removed by means of an ammonia soap which I devised ten years ago for the purpose. Its composition is as follows:—From ten to thirty minims of liquor ammoniæ (according to age), one drachm of ether, one ounce of soft soap. To be kept air tight. First foment a small portion of the skin with very hot water, then apply the soap firmly with the ball of the thumb, as if cleaning off varnish from an old oil painting, and very quickly wash away all vestiges of soap. Great care must be taken in using this soap on sensitive parts or on delicate skins, else pretty severe erythema may be set up. Careful dieting, total abstinence from every form of alcohol, sharp out-door exercise, hot bath, Turkish or electric baths, assist matters. Systematic lung hygiene—i.e., enforced expiration followed by prolonged pernasal inspiration, brisk towellings, general effleurage or skin rolling, scrupulous avoidance of excitement, of ices, and of cold beverages, no sea bathing, and the exceptional use of the cold bath, soft woollen clothing, &c., and the employment of sulphur or arsenic as internal remedies according to indications—these are the main outlines of treatment, to be modified by the special exigencies of individual cases.

Berkeley Mansions, Hyde-park, W.

TWO INSTRUCTIVE CLINICAL CASES.

BY JAMES OLIVER, M.D., F.R.S.EDIN.

CASE 1. *Intra-uterine pregnancy; delivery normal.*—Jane L——, aged thirty-seven, and married fifteen years, has had seven children and no miscarriages. The last child was born in April, 1887. It was suckled for twenty months. The patient became "unwell" for the first time after this confinement, when the infant was twelve months old, April, 1888. From April, 1888, until November, 1888, menstruation recurred regularly every month, and was of the usual amount. She was not, however, "unwell" in December, and, thinking it was probable she might be pregnant, she weaned the child. The catamenial discharge appeared again towards the end of January, 1889, and continued for the usual number of days (five). Towards the end of February she was again unwell, and this hæmorrhagic discharge continued during the whole of March and the first fortnight of April, ceasing occasionally for two or even three days. The patient was seen by me on Aug. 1st, and stated that she had not been unwell since the 14th of April. She further stated that she had felt the movements of the child on April 22nd (Easter Monday), and that she had continued to feel the movements until a month ago (some time in July). Eight days before I saw her (about July 24th) the patient began to experience pain in the left side and in the back, coming to the front like "labour pains," and thinking labour had actually begun she sent for her doctor. On Dec. 30th, 1889, the patient was delivered without the slightest trouble apparently of a full time and living child, a boy. In this case, if we allow 275 days for the duration of pregnancy, the patient must have conceived about March 30th, and yet the catamenial discharge, with the exception of two days, continued during the whole of March and the first fourteen days of April. Besides, quickening was felt on Easter Monday (April 22nd), and, as the woman was already the mother of seven children, this announcement demanded consideration. Taking all the facts and physical signs into consideration, I advised watching; this was done, and the result was a full-time and living child on Dec. 30th.

CASE 2. *Extra uterine pregnancy; delivery by abdominal section.*—Clara M——, aged thirty-seven, and married sixteen years, has had five children and one doubtful miscarriage. The last child was born twelve years ago. The doubtful miscarriage is supposed to have taken place in April, 1889. The history given in regard to this occurrence is that the patient had not been unwell for eight weeks; thereafter a hæmorrhagic discharge appeared, and continued for seven weeks, ceasing altogether on May 4th. Prior to this amenorrhœal menstruation had recurred regularly every month. About May 26th there was discharge of blood for two days. From May 28th till Christmas the patient was the subject of complete amenorrhœa again. On Christmas Day the catamenial discharge reappeared, and continued for eight weeks. The hæmorrhage ceased about Feb. 7th, and thereafter the patient was not unwell again until April 24th, when the discharge appeared, and continued for six days. The patient began to feel movements in October, and these were felt as plainly as they had ever been felt during any of the previous pregnancies, and they were felt continually until two days before Christmas, since which time they have not been felt at all. As the uterus slightly enlarged was felt closely incorporated with a swelling on the left side of the pelvis, and which swelling extended to above the umbilicus, it was decided to open the abdominal cavity. On May 1st the abdominal cavity was opened, and a full time fœtus (dead, but not decomposed) was found in a thick sac located in the left broad ligament. The left Fallopian tube and uterus were both well defined; the left ovary, however, could not be detected. In this case the fœtal movements were distinctly felt by the patient in October, and from that time they were continuously felt until two days before Christmas. The child removed by abdominal section appeared to be a full time child, and it is quite probable, considering the contents of the sac in which the fœtus lay, as well as the character of the inner wall of the cavity and the appearance of the placenta, that the child had died soon after Christmas. This being so, what was the probable date of conception? Here, again, if we allow 275 days for the duration of pregnancy, and calculate back from Dec. 30th, say, which by chance happens to be the day on which Case 1 was normally delivered (see above), conception probably took place about March 30th, and this date corresponds somewhat closely with the amenorrhœa of eight weeks prior to the hæmorrhage which occurred in March and April, and which, it is stated, ceased about May 4th. The miscarriage, therefore, which it is supposed took place in April was most probably not a miscarriage, but an intercurrent hæmorrhage dependent upon the presence of a developing ovum in the left broad ligament. This patient had never experienced any pain like labour, although she had complained more or less of pain in the lower abdomen ever since May.

Gordon-square, W.C.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CLUBBING OF FINGERS AND TOES.

BY ANGEL MONEY, M.D., F.R.C.P.

Is venous congestion the chief cause of clubbing of the fingers, toes, nose, ear-lobules, lower end of the spinal cord, and the most distal extremities of the circulation? Text-books are silent on the relationship between clubbing and cyanosis in congenital heart disease. An average statement is: "Clubbing of the fingers and toes is very characteristic" of morbus cœruleus.

A female child, aged ten months, died with acute paralytic dilatation of a congenitally diseased heart. It was exceedingly blue at all times, and had been so from one day after birth. Screaming notably increased the blueness, perhaps partly because screaming and kicking increased the poverty of the oxyhæmoglobin. But to the point at issue. No trace of clubbing, and cyanosis of ten months' duration. Necropsy revealed entire absence of the ventricular septum.

May we not reasonably assume the absence of much venous congestion; and this absence may be the cause of the absence of clubbing. Chronic and acute pleural effusion, purulent or serous and chronic phthisis, must cause venous congestion. Clubbing of the extremities is coördinate with congestion, œdema, and induration of liver, spleen, kidney, &c., the swelling to be proportional to the softness and looseness of the congested organs. Hence the ease with which clubbing is caused in young infants whose tissues are so soft and loose. In many cases of stenosis of the pulmonary artery the fingers have been noted to be clubbed.

MUCOR CORYMBIFER IN THE EXTERNAL AUDITORY MEATUS.

By HARRY GRAHAM,
PROFESSOR OF PATHOLOGY IN THE SYRIAN PROTESTANT COLLEGE.

DURING last September a young Moslem woman presented herself at the polyclinic of the Johanniter Hospital, suffering from severe pain and itching in the auditory meatus, with tinnitus aurium. A whitish-greyish-looking plug, mixed to some extent with rather dark wax, was removed from the ear and taken to the laboratory of the Syrian Protestant College, when a very careful examination was made and the growth found to be mucor corymbifer. A cultivation was made and the growth observed for several days. The fruit hyphæ were colourless, and the sporangia were covered by a smooth-looking, transparent membrane. The sporangia leaves branched out from the transparent stalk in the usual umbelliferous manner, and the spores, although small, were very closely packed together, colourless and oval. The young woman was probably completely relieved from her bad symptoms, as she did not return to the clinic. She disappeared entirely from our observation, and no history of her previous condition was obtained, except that she had suffered from otorrhœa. We did not learn what she had used to check the discharge.

Several forms of aspergillus have been frequently found in the auditory meatus of man; but among the mucorineæ only the corymbifer has been found, and that only reported, so far as I can learn, by Huckel of Jena.

Birût, Syria.

ACTION OF DIFFERENT DRUGS ON LARVÆ.

By A. R. ALDRIDGE, M.B.,
SURGEON MEDICAL STAFF.

IN connexion with Dr. Mackintosh's letter in THE LANCET of Sept. 27th on the action of different drugs on larvæ, the following case, which recently came under my care, may be of some interest.

A native woman, whose clothes and person were extremely dirty, came complaining of pain in the forehead and temples, loss of appetite, and difficulty in swallowing. There was a watery, slightly blood-stained discharge from the left nostril, and she stated that "insects" had for the last two days been discharged from this nostril. Syringing the nostril with a saturated solution of boric acid produced nothing, but the following day she brought about a dozen larvæ of muscidæ, which she said had been discharged during the day. These showed active movement, but it was found that chloroform dropped on to them rapidly killed them, chloroform water twice the pharmacopœial strength (two drachms to twenty-five ounces) doing so after one or two minutes. The nostril was first thoroughly swabbed out with cotton wool soaked in chloroform, and afterwards syringed with the chloroform water. During the day fifteen or twenty larvæ escaped, some dead, some showing slight movement, and a few pretty active. The treatment was repeated in the evening and next morning, when only a few dead ones were passed from the left nostril, but a few living ones came from the right. This was treated in the same way, with the effect of eight or ten dead larvæ escaping, after which no more appeared, and the discomfort soon subsided.

A case is also quoted in the *Medical Record* for September in which a swelling behind the ear simulating an abscess was proved on incision to be full of "maggots," which were immediately killed by a few drops of chloroform poured into the wound.

Jullundur, Punjaub.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF EMPYEMA SECONDARY TO FRACTURE OF RIBS; RECOVERY.

THESE cases illustrate a very rare complication after simple fracture of the ribs—that of suppuration in the pleura. "It is probably in most cases the consequence of a serous effusion or hæmorrhage resulting directly from the injury, and may, if the lung is injured, be a pyo-pneumothorax."[1] The rarity of this condition after such injury is shown by the fact that in the records[2] of the same hospital for the years 1880–88 inclusive no similar instance is to be found. If it be recollected that only the most severe cases are admitted to the wards of a large hospital, the majority being treated as out-patients, the percentage of those complicated by empyema is indeed small. The number of patients who had sustained fracture of the ribs under treatment in the wards during the years mentioned was 216—185 males and 31 females. Of this number, 23 died, death being usually caused by other injuries inflicted at the time. Again, the only similar case that we have been able to find recorded was published in the year 1852,[3] and was that of a boy in the same hospital, under the care of Dr. Peacock. The patient was under treatment there three years after an injury for a sinus communicating with the pleura, which remained from the fracture of some ribs on the same side. The empyema had formed one week after the injury, for which he had been treated elsewhere. For the report of these cases we are indebted to Mr. E. Solly, surgical registrar.

CASE 1. *Fracture of ribs; empyema; resection of rib.* (Under the care of Mr. Sydney Jones.)—J. M——, aged fifty-seven, was admitted to the Alexandra ward on July 19th, 1890, and discharged on Sept. 10th. She was quite healthy up to the time of an accident which occurred seven days before admission. She was pushed down a plank at the seaside and rolled off it on to the sand, falling on her right side. She was seen by a medical man soon after, but nothing was discovered, and she was told that she had probably caught cold. Next day cough became troublesome, and was accompanied with slight hæmoptysis and substernal pain. This continued up to the time of admission, when she was found to have sustained fractures of the fifth, sixth, and seventh ribs on the right side. There was no crepitus, but acute tenderness and some thickening over the seat of fracture just anterior to the point of greatest curvature. No emphysema or evidence of pneumothorax. There was dulness to percuesion, with diminished breath sounds over the lower quarter of the right lung posteriorly; the rest of the right lung and the left lung being resonant. Many sharp whistling rhonchi generally distributed over the lungs, especially in front. No crepitations. Some friction was heard at the right base anteriorly. Respiration rapid (36 per minute) and noisy; face more or less cyanosed; a dry hacking cough constantly present, with expectoration of frothy muco-purulent character. Temperature 100°. During the next two days the general condition improved slightly, but the temperature remained subfebrile, and the physical signs showed increasing fluid in the pleural cavity. An aspirator was introduced on the right side in the mid-axillary line, on a level with the lower angle of the scapula, and three ounces and a half of turbid, semi-purulent, but not sanious fluid, withdrawn. Considerable relief was obtained after aspiration, but the temperature still varied between 100° and 102°, and the signs showed that fluid was reaccumulating. On July 30th aspiration was again tried, but only one ounce withdrawn, as the fluid was too thick to flow; it was purulent, and tinged with fresh blood from the parietes. During the next two

[1] Heath: Dictionary of Surgery, vol. i.
[2] St. Thomas's Hospital Reports.
[3] Med. Times and Gazette, vol. i., p. 260.

days muco-purulent expectoration was very profuse, and at the same time the level of dulness fell slightly, suggesting that some of the pus had been coughed up through an opening into a bronchus. On August 2nd chloroform was administered, and an inch and a half of the fifth rib removed subperiosteally, at the seat of fracture, which was in process of union, without necrosis. The pleura being opened, a large quantity of pus was evacuated from a cavity shut off by adhesion and lined with thick lymph. The lung expanded well at the first cough. A drainage-tube was inserted, and the wound closed up to it with sutures. After the operation the temperature at once fell to normal, and remained so, with the exception of one or two sporadic rises to 100° and 101°, until the patient's discharge. The flow of pus was free for the first few days, and then rapidly diminished; the drainage-tube was gradually shortened as the cavity contracted, and was finally removed on Sept. 3rd, thirty-two days after the operation. The physical signs showed that with the exception of slight local thickening of the pleura, no ill effects remained. The patient was discharged completely cured sixty days after admission.

CASE 2. *Fracture of ribs; pyohæmothorax; paracentesis; resection of necrosed ends of ribs; recovery.* (Under the care of Mr. Croft.)—George H——, aged sixty-two, a carpenter, was admitted on May 27th, 1890, having slipped on a piece of orange-peel, striking the left side against a bench as he fell. He was suffering from severe shock, the skin being cold, with clammy sweat; no cyanosis, but considerable dyspnœa. The eighth and ninth ribs on the left side were fractured near the middle of their greater curvature; marked crepitus felt, with emphysematous crackling; no sign of pneumothorax; slight cough; no hæmoptysis; no expectoration. Chest rounded and somewhat hyperresonant. Thoracic and abdominal viscera normal. Urine acid; no albumen or blood; sp. gr. 1028. Pulse small; arteries rather thickened. On May 28th the subcutaneous emphysema had subsided. There were some cough and dyspnœa, with a few rhonchi in the lungs. Temperature 99° to 101·4°. During the next few days the temperature varied between 99° and 103°. General condition worse. On June 7th there was evidence of pleuritic friction in the left axilla and consolidation at the base of the right lung; sleep disturbed, with occasional delirium. The temperature reached 104°. On June 9th evidence of pneumonic consolidation in the left lung was found, and three days later signs of fluid in the left pleura. At the same time a fluctuating swelling appeared at the angle of the left scapula, which was believed to communicate with the pleura. The pneumonic condition of the right lung began to clear up. On the 23rd thirty-one ounces of sanious pus were drawn off with the aspirator, with some relief to the patient, but no marked alteration in the physical signs, the temperature continuing constantly of a hectic type. On July 8th the area of dulness reached round to the cardiac area, which pulsated strongly when the patient was lying on his right side. On the 10th a second paracentesis thoracis was performed, and fifty ounces of thick drab-coloured purulent fluid withdrawn, with only temporary relief. On the 12th, under anæsthesia, an incision was made over the seat of fracture; the ends of the broken ribs, being necrosed, were removed, and through the opening thus made about twenty ounces of fetid pus escaped. The wound was washed out with boracic acid, a drainage-tube inserted, and an iodoform, salicylic, and wood-wool dressing applied. After this the general condition rapidly improved; the temperature was practically normal after the second aspiration (July 10th). The drainage-tube was repeatedly shortened, till on August 15th it was left out altogether, and on the 21st the patient left the hospital for a convalescent home, the wound being completely healed.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

RUPTURE OF THE AXILLARY ARTERY; LIGATURE; AMPUTATION AT THE SHOULDER-JOINT; RECOVERY.

(Under the care of Mr. H. G. RAWDON.)

IN this case the results of effusion of blood into the loose cellular tissue of the axilla from complete rupture of the artery are well exemplified; but the cause of the rupture of the vessel is not very apparent. Rupture of this artery in consequence of the application of much violence to the axilla, from twist of the arm, or in the reduction of old-standing dislocations of the humerus, is well known. In this case the duration of the effusion was not known; but the indications for prompt surgical interference were at once recognised, and the ends of the ruptured artery ligatured. The amount of blood-clot which escapes in these cases of rupture of the axillary artery is sometimes considerable. Syme measured as much as 7 lb. in a case of his own. For the notes of this case we are indebted to Mr. W. H. Carthew Davey, senior house surgeon.

M. M——, aged forty-two, was admitted into the Royal Southern Hospital on June 24th, 1890. He was brought in by the police, who stated they had found him in the roadway lying in a semi-conscious state, evidently the effects of drink. On being roused he complained of great pain over the region of the right shoulder. On examination the arm was noticed to be very much swollen from the shoulder down to within three inches of the elbow-joint; the swelling also extended over the right side of the back to some distance below the inferior angle of the scapula; the front part of the chest just below the clavicle was swollen, but only to a very slight extent compared with the back and arm. The forearm and hand were cold; no pulsation of arteries was felt either at the wrist or at the elbow-joint. Rupture of the axillary artery was diagnosed. It was decided to cut down in the course of the axillary, and if found possible to ligature the torn ends; if not, to amputate at the shoulder-joint. Mr. Rawdon accordingly made a long incision extending from just beneath the clavicle to the lower border of the pectoralis major muscle, cutting through both pectoral muscles, and clearing out the blood-clot, of which there was a great quantity. The torn ends of the vessel were soon found; the artery had been torn through completely at the junction of the first and second portions. There was no bleeding from the ruptured ends, occlusion of the vessel being complete; these were ligatured, but unfortunately in clearing the surrounding tissues the axillary vein was wounded, which also had to be ligatured; the parts were washed thoroughly and dressed antiseptically, the forearm and hand wrapped in cotton wool, and the patient put back to bed.

June 27th.—Forearm still cold and slightly discoloured; sensation completely absent in the arm. Patient delirious; temperature slightly above normal; parts dressed.

28th.—As the arm was quite black and cold it was decided to amputate at the shoulder-joint; this was done in the usual way.

29th.—The wound dressed, and parts looking healthy. Patient taking food well. Pulse good; temperature normal.

July 3rd.—The patient continued to improve daily; the drainage-tubes were gradually shortened, and finally left out altogether about the end of a fortnight, his recovery being uninterrupted.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Femora after Osteotomy.—Hepatic Lipoma.—Harlequin Calf.—Psilosis.—Substernal Goitre.—Ulceration of Gall-bladder.—Tumour of Trachea and Œsophagus.

AN ordinary meeting of this Society was held on Dec. 16th, the President, Dr. W. H. Dickinson, in the chair.

Mr. JAMES BERRY exhibited two Femora after Osteotomy, which showed very perfect repair. They were taken from a boy seven years of age, who died of cerebral meningitis in the Royal Free Hospital on Sept. 21st, 1889. On Sept. 26th, 1886, just three years before, Macewen's operation for genu valgum was performed on both sides by Mr. Howard Marsh at St. Bartholomew's Hospital. The bones were divided with a chisel in the usual manner and the operation was perfectly successful. The distance between the two malleoli before operation was three inches and three-quarters. The chief interest of the specimens lay in the very perfect repair which had taken place since the operation. Externally the bones showed no traces whatever of the osteotomy, and it was impossible from examination of the external surfaces of the bones to detect the exact place at which they had been cut. Another point of interest lay in the high position of the scar in the bone. The osteotomy had been performed just above the condyles, but the scar was situated almost as high as the junction of

the middle thirds of the bone. The explanation offered was that, as the lower part of a femur grew more rapidly than the middle, the scar had gradually altered its relative position during the three years which intervened between the operation and the death of the patient.—Mr. SHATTOCK remarked that the bones were still much bent. The completeness of the repair was probably due to the fact that active growth was going on.—Mr. DAVIES COLLEY was surprised to see the ends in such accurate coaptation. He asked if there was any sign of scarring in the soft parts; he had recently seen a small hæmatoma develop after the use of the chisel.—Mr. BERNARD PITTS said that two years ago he did an osteotomy for genu valgum in a girl of fifteen, the subject of late rickets. A week ago the femur gave way, although she had been walking about for more than a year, and the fracture, which was of soft character, appeared to be one inch and a half above the site of the operation.—Mr. BERRY, in reply, said that there was simply a scar in the skin.

Dr. ROLLESTON showed a round mass of fat surrounded by a fibrous capsule about the size of a walnut, found half imbedded in and half projecting from the convex surface of the right lobe of the liver. It was fairly firmly fixed. On further investigation it was found that the depression on the surface of the liver, in which the lipoma lay, was lined by the serous investment of the liver. So that the fatty growth did not belong to the liver, but had been brought from a distance and come to rest on, and was afterwards imbedded in, the liver. Dr. J. W. Ogle had described a loose body in the peritoneal cavity (Trans. Path. Soc., vol. vi., p. 208) which had evidently been imbedded in the convex surface of the liver, the depression being lined by peritoneum. In this case the body had become loose at the time of the post-mortem. The loose body contained fat, but was not regarded by Dr. Ogle as a loose appendix epiploica, though the point was discussed. He showed Dr. Ogle's specimen from St. George's Hospital Museum for comparison.—Dr. WILKS did not remember to have seen a lipoma on the suface of a solid organ, though of course they were common on the hollow viscera. He agreed with the explanation of the author, and had known material escaped from ovarian cysts to gain attachment and grow in the same way.—Dr. NORMAN MOORE had seen a similar case, which he believed arose in the manner described.—Dr. ROLLESTON, in reply to the President, said that the specimen was one of organised fatty tissue, and similar specimens had been described by Virchow.

Mr. BLAND SUTTON showed a "Harlequin" Calf, which had been preserved in the museum of the Royal College of Veterinary Surgeons since 1869, and was then regarded as an instance of elephantiasis. The animal was hairless except at the distal ends of the limbs, but on close examination red hairs could be seen in the furrows, which ran for the most part at right angles to the long axis of the body. Microscopical examination of the smooth parts showed that the skin really contained hairs, but that an excessive amount of vernix caseosa had been poured out from the sebaceous glands, and this had dried, forming a hard case. Later, as growth went on, the case had cracked, leaving the furrows. He compared it with a specimen of "harlequin" fœtus he had previously shown, and referred to other recorded human examples.

Dr. WETHERED read a paper on Psilosis or Sprue. He said that it was a tropical disease occurring chiefly in China, characterised by progressive wasting, a peculiar condition of the tongue, looseness of the bowels, and pain on swallowing. The tongue varied much from day to day, in the earlier stages being very red, and having a tendency to crack, but later it was free from fur, smooth, showed no trace of papillæ, and slight superficial ulcers were often seen. The motions were very characteristic; they were either of a pale-straw colour, frothy, and quite unformed, or they consisted of a greyish-white pultaceous mass, often in a state of apparent fermentation. Though comparatively rarely fatal, the disease ruined the life and prospects of thousands. These specimens were obtained from a patient of Dr. Thin's. The patient apparently contracted the disease in 1887, and came to England in January, 1890, but died three weeks after his arrival. At the necropsy, the body was greatly emaciated. Examination of the thoracic cavity showed an emphysematous condition of the lungs, old pleurisy, and pericarditis. The liver, spleen, and kidneys were healthy, the pancreas was rather shrunken. The tongue was clean, the walls of the œsophagus were a little thickened. The intestines gave a peculiar velvety feel to the hand. The walls of the duodenum and the whole of the small intestine were thinned, and lined throughout with a peculiar mucoid-like material, which could be easily scraped off, leaving the mucous coat of the intestine exposed. No ulcerations could be seen. The walls were so thin as to be perfectly translucent. In the large intestine similar changes presented themselves. Microscopically, the epithelium of the tongue was completely destroyed in some places; the muscular layers seemed to be quite healthy. In the œsophagus very marked and extensive changes were noticed; the epithelium was entirely destroyed, and the mucosa densely infiltrated with small round cells. The inflammatory products had penetrated to the muscular layer; the submucous coat was thickly packed with exudation cells, and the glandular substance to a great extent destroyed. The stomach and duodenum were healthy. In the jejunum slight inflammatory action was noticed. In the ileum the most marked changes were found; the mucosa was almost entirely destroyed, being replaced by a structureless substance enclosing leucocytes, and here and there the remains of a follicle. The submucosa appeared much thickened, and the fibrous tissue abundant, and more than usually solid in consistence. The walls of the vessels were also thickened, altogether denoting a more chronic process than in the other parts of the intestinal tract. The muscular layer was thinned. The cæcum and rectum showed no changes. No distinctive micro-organisms could be found. Judging from the symptoms during life and the post-mortem appearances, the pathology of the disease, so far as is known at present, must be set down as a defect in absorption of the digestive products rather than of deficient digestion.—The PRESIDENT inquired if it were a form of chronic enteritis, and confined to the tropics.—Dr. THIN said that the disease existed in Northern China, the Straits Settlements, Java, and Cochin China, and a doubtful case had been reported in the West Indies. He called attention to the fact that in the mouth, œsophagus, and ileum, where the disease was found, the acid reaction of the other parts of the intestinal canal is wanting, and Dr. Lauder Brunton had suggested to him that this fact might afford some explanation of these parts being specially selected by the active agent in producing the malady.—Dr. WILBERFORCE SMITH referred to a patient suffering from sprue who had returned from the north of India, and who was cured by an exclusively milk diet.—Dr. WETHERED, in reply to Dr. Rolleston, said that the entire length of the large intestine was unaffected.

Mr. BERNARD PITTS related a case of Substernal Goitre arising in an accessory thyroid. The specimen was removed from a man aged fifty-four, on Jan. 12th, 1888. For seven or eight years he had noticed a slight swelling just above the sternum, and this had increased rather rapidly during the last year. He had never suffered any inconvenience from it until the commencement of 1888, when he was suddenly seized with a severe choking fit whilst taking a walk. The difficulty of breathing lasted five minutes, and had greatly alarmed him. On examination, he appeared a healthy man, with a small round swelling just visible in the median line of the neck immediately above the sternal notch, and evidently extending behind the sternum. On deep inspiration some stridor could be detected. He had never had any difficulty of breathing at night. The tumour was removed by a median incision, and shelled out without much difficulty. No large vessels required ligature, but a considerable cavity was left, which extended for the most part behind the sternum, and was packed with iodoform gauze. The patient made a speedy recovery and lost all stridor. The tumour was discoidal in shape and measured two inches in diameter and an inch and a quarter in thickness. A section under the microscope showed ordinary thyroid body structure, the vesicles were dilated and filled with colloid material. It made its appearance rather late in life, and apparently without any connexion with the thyroid gland proper, that organ being of normal size. It must, therefore, have developed in connexion with an accessory thyroid. The greater part of the tumour was behind the sternum, and the trachea was very markedly flattened from before backwards in a manner quite unusual from ordinary goitre pressure, even when the enlargement of both lobes extended downwards behind the sternum. Such substernal goitres were referred to by Virchow, who stated that the trachea was usually thus flattened.—Mr. BERRY regarded the specimen as one of encapsuled cystic adenoma

of the thyroid which had become detached from the gland. He dissented from the idea that it originated in an accessory thyroid. There had been no confirmation of it by dissection, and accessory thyroids were very rare indeed, the only one of which he knew having arisen in connexion with the thyroid duct. Recently a case of extruded adenoma had been described under the name of "wandering goitre."—Mr. WILLIAMS said that 10 to 15 per cent. of mammary tumours arose in connexion with outlying nodules of the gland, and the same held good with parotid growths.—The PRESIDENT felt gratified that the patient had been saved from the horrible death that occurred in cases of dyspnœa from compression of the air-tube.—Mr. PITTS replied that an accessory thyroid had been found in one case in twelve when carefully looked for. Dyspnœa had often supervened suddenly in cases of goitrous masses in the neck which had not moved, and it might therefore have happened in his own case.

Dr. NORMAN MOORE showed a Gall-bladder with Internal Ulceration. It was distended with bile, containing much fine biliary gravel but no distinct calculi. It was much elongated and thickened, but microscopic sections showed that no new growth was present. On washing away the gravel the inner surface was found to be universally injected, and all over it were numerous minute ulcers most abundant at the fundus. These were shallow, and contained pus and mucus. The papilla of the bile-duct was unusually large and prominent, but there was no obstruction of the common duct. At the fundus of the gall-bladder one of the ulcers had perforated, causing general peritonitis. The patient was a man aged sixty-seven years, who was suddenly attacked while in bed with bronchitis, with symptoms of general peritonitis. These had been preceded by prolonged constipation, and in hopes of finding some obstruction his abdomen was opened by Mr. Walsham by an incision above the umbilicus. A large quantity of pus escaped from under the right lobe of the liver where it was partially enclosed by recent lymph, there being no old abscess cavity. The pus was bile-stained, and a large quantity was washed out. The patient had no gout or other morbid condition except some emphysema of the lungs. In the museum of St. Bartholomew's there was a specimen prepared by the late Dr. T. R. Farre, in which gall-stone had ulcerated through the wall of the gall-bladder into the peritoneum; but such cases were much rarer than those of ulceration through the common duct. Only two other examples of perforation of the gall-bladder itself (without the presence of new growth) had occurred to Dr. Moore. In both the gall-bladder had become adherent to the abdominal wall, abscess followed, and was opened; gall-stones were discharged, and recovery took place. The specimen was of a still more uncommon variety, for it showed perforation without the presence of any mass which could be called a calculus.—The PRESIDENT wondered if the trouble had been due to a gall-stone which had been passed.—Dr. HADDEN inquired for a history of traumatism, and asked if the gall-bladder extended below the ribs.—Dr. HALE WHITE speculated on the origin of the ulceration, and suggested that it resembled the "distension ulcers" behind intestinal stricture. In very weak people the gall-bladder sometimes became enormously distended.—Dr. MOORE, in reply, thought the ulceration might have been set up by fine bile gravel.

Mr. J. CAHILL brought forward a Tumour involving Œsophagus and Trachea in the Neck. The specimen, taken from a woman of forty-nine, consisted of larynx, trachea, and bronchi, with upper two-thirds of œsophagus. Immediately below the level of the cricoid was a tumour about 2 in. long, embracing the œsophagus and the sides of the trachea. The growth penetrated the œsophagus, in which it formed a fungous constriction of the calibre of a No. 6 catheter. It penetrated the trachea posteriorly and at the sides. There was another larger tumour immediately below the bifurcation of the trachea, adherent to the bronchi and pulmonary vessels, partially caseous and apparently lymphomatous. The lungs contained numerous small tubercles. Other viscera healthy. The lymphatic glands in other parts of the body were not enlarged. The patient suffered with increasing dysphagia and dyspnœa for six months before death. Paralysis of right vocal cord appeared four months before death; both vocal cords were affected two months later. From the invasion of the œsophagus and trachea the cervical growth was thought at first to be probably carcinomatous in character. On microscopical examination, however, it appeared to be of a lymphomatous nature and analogous to the glandular mass in the posterior mediastinum. If the tumour from the neck were simply due to tubercular infection of lymphatic glands its effects in perforating the trachea and œsophagus and causing stricture of the latter organ were certainly unusual.—Mr. BOWLBY compared the case with one previously exhibited by Messrs. Treves and Silcock, which was thought to have arisen in the remains of the branchial clefts. Microscopically it appeared to be a malignant epithelial growth.—On the motion of the PRESIDENT the specimen was referred to the Morbid Growths Committee.

The following card specimens were shown:—

Mr. J. HUTCHINSON, jun.: "Fungus Bodies" in Mammary Carcinoma.

Mr. L. D. SPANTON: Myxosarcoma of Prostate.

Dr. HALE WHITE: Commencing Suppuration of the Gall-bladder in Typhoid Fever.

Dr. W. TYSON: Lipoma from Arm; Gall-stone in Ductus Communis; death, with pylephlebitis.

Mr. EDGAR WILLETT: Intra-cystic Carcinoma from Pectoral Region.

DR. GOODHART: Fibroid Disease of Base of the Lungs with Bacillary Phthisis.

Mr. S. PAGET: Duct Carcinoma of Breast; Cartilage Formation in Tumour of Testis.

SCOTTISH MICROSCOPICAL SOCIETY.

AT the meeting of this Society, held in Edinburgh on Friday, the 19th inst., Professor Rutherford, F.R.S., in the chair, Dr. W. G. Aitchison Robertson read a paper on the Growth of Dentine and the Relation of Nerves to Odontoblastes, being the results of a research carried out in the physiological laboratory of the University. He studied the development of dentine in the teeth of rabbits and kittens; in the former taking advantage of the aid given by feeding the animal for a time on food containing madder, which stains the dentine matrix produced while the madder is being taken just as it does the matrix of bone. He finds that elongation of the dentine results from proliferation of connective tissue cells in a formative ring at the base of the tooth follicle. The diameter of this ring enlarges while the tooth is growing in breadth as well as in length, but narrows while the fang is growing into the shape of an inverted cone. The thickening of the dentine results from new layers of matrix added from within under the influence of odontoblastes, and not from interstitial growth, which produces nothing more than a slight increase in matrix between the dentinal tubules in the crown of the tooth. The manner in which the pulp cavity comes to be occluded and the dentine deprived of sensibility in the crowns of the incisor teeth of the rabbit was explained. The odontoblastes in the tooth of an ox are bipolar, one process being a dentinal fibre, and the other continuous with the nerves of the pulp. He thus regards the odontoblastes and dentinal fibres as becoming in course of development the terminal organs of the nerves of the tooth. Mr. Alexander Frazer, M.A., exhibited a new microtome adapted for cutting tissues imbedded in paraffin, or frozen by ether or ice, as the operator may desire. Professor J. Hunter read a paper "On the Construction of some New Forms of Athermanous Aplanatic Condensers Designed for Photo-Micrography."

Reviews and Notices of Books.

Longevity and Climate. By P. C. REMONDINO, M.D., San Diego, California.

IN this *brochure* Dr. Remondino discusses such questions as the relations of climatic conditions to longevity, history, and religion; the relations of climate to national and personal habits; the climate of California, and its effects in relation to longevity. It will thus be seen that his remarks range over a wide and somewhat vague field. At the outset Dr. Remondino makes an assertion in which he is certainly mistaken. He says that "the art of prolonging life has made but little progress in the last hundred years. With all the progress made in physiological, chemical, and hygienic science, that of prolonging life has not made a like advance."

It is generally agreed by the highest authorities in hygiene and public health that the average duration of human life has notably risen during the present century, some putting the increase as high as ten years. There can be no doubt that a steady fall in the death-rate has been going on and still continues, and this fall is, of course, only the reflex indication of an increase in the average longevity of individuals.

Of all the causes which influence longevity, Dr. Remondino asserts that "none has the same influence as climate, as it determines the productions of the earth and the nature of the food of which man is to partake, as well as the quality and quantity required." In a general sense this is probably true, as no doubt the climatic conditions prevailing on this globe are the most potent of all causes in their influence upon human life; but it is more open to doubt whether we are in a position to say that one type of climate promotes longevity more than another. We imagine that comparative statistics of the average duration of life, say in Europe, as compared with India or China, are not yet available. There is a curious principle of balance and compensation in all human affairs, and a climate favourable to the integrity of one set of organs is often hurtful to another set. Thus, a climate favourable for the pulmonary organs may promote hepatic disease, while we may purchase a comparative immunity from rheumatism by an increased liability to yellow fever or malaria. A climate by its warmth and dryness—Egypt for example—may favour its inhabitants by allowing an out-of-door life and diminishing the risks of exposure, but the benignness of the climate may so promote the lower forms of life that parasitic disease becomes a scourge. Similar examples might be multiplied indefinitely. While, however, we do not think that this subject is ripe for dogmatic treatment, there can be no doubt that the influence of climate upon longevity offers an inviting and possibly a fruitful field for further research.

Dr. Remondino deals at length with the influence of diet upon longevity, and his conclusion is that "a spare diet, even when carried to an extreme degree as to poverty of quantity and quality, is conducive to a long life." Many instances are quoted from history in support of this position. The question, however, so far from being a simple one, is really most complex. We have first to determine precisely what we mean by a "spare diet," the differences in the amount of food consumed by different individuals under normal conditions being very striking. We have next to take account of the peculiarities of the individual, especially his age and occupation. Abstemiousness is no doubt an admirable thing in elderly people, whose organs of digestion and excretion are more or less worn out, but it is not equally appropriate to the young and vigorous. Again, a very meagre dietary may suffice for those who are leading a life of studious ease, meditation, or idleness. It is, however, altogether another question how far an active and laborious life can be maintained upon it. Much mischief is often done by laying down hard-and-fast, often fantastic, restrictions about diet without regard to the necessities or peculiarities of the individual; and we would strongly commend to our readers the eminently wise and philosophic utterance recently made on this subject by Sir William Roberts. We are sorry to note that Dr. Remondino endorses the familiar but quite exploded fallacy that a diet of fish (especially shell-fish) has an exciting effect upon the sexual functions. There is no foundation for this idea. We agree with Dr. Remondino in his condemnation of a meat dietary for very young children. There is ample evidence that such a dietary is not conducive to vigorous growth, but rather the contrary, and that it renders those nourished in this way more than usually prone to disease. Milk, eggs, farinaceous foods, porridge, and whole meal will be found to be much more suitable to the young child than meat, which, however, need not be forbidden but simply restricted.

Dr. Remondino has much to say on the *quæstio vexata* of the use of intoxicants. On the general question we need not at present say anything, but we agree with him in deploring the action of the American Government which "has foolishly done everything towards obstructing the importation of light French wines by the imposition of heavy duties, thus placing these wines only within the reach of the very wealthy, thereby encouraging the taste and forming the habit of drinking whisky, a national taste and habit which to the inhabitants of Southern Europe is something incomprehensible."

As regards the influence of temperature upon longevity, Dr. Remondino believes that equability is highly favourable, and that sudden variations of the thermometer and barometer are very hurtful. He quotes Hufeland to the effect that "in islands mankind always becomes older than in continents lying under the same degree of latitude; thus men live longer in the islands of the Archipelago than in the neighbouring countries of Asia, in Cyprus than in Syria, in Formosa and Japan than in China, and in England and Denmark than in Germany." These statements may be true, but we doubt if any information really exists upon the subject. Even if islands could be shown to be healthier than neighbouring continents, there are many other points besides climate—for example, the effect of isolation and diminished exposure to epidemics—which would have to be taken into account.

In his remarks upon California, Dr. Remondino may be presumed to speak from personal experience; but some of his statements will considerably startle our readers. He informs us that "a climate like that of California must, from the free access of sea air, possess an immunity from heart and kindred diseases, and the character of its soil must give to its inhabitants a like immunity from cancer"! Comment is superfluous. We are disposed to think that the climate of California is one of unusual excellence, but we would naturally pause before endorsing such statements as that "California has without exception, considering the extent of its coast, the driest and warmest soil that is to be found in any practically habitable portion of the globe. It has the hardiest, longest living, and healthiest population imaginable." We would suggest to the author that, instead of such sweeping general statements, a little specific evidence—a few hard facts—would be more acceptable and more convincing. We feel the same hesitation in following him when he informs us that in California arterial changes are rare in the aged, and that atheroma of vessels, calcareous changes, apoplexy, aneurysms, gangrene, &c., are rarely found. If such conditions are infrequent in Californian practice, we suspect the explanation—in part or wholly—must be that in a comparatively new country the bulk of the settlers are comparatively youthful and vigorous persons, and that senility, with its attendant phenomena, is relatively rare.

Medical Visiting Lists.—In addition to those noticed in our last week's issue we have received samples of Smith's Visiting Lists, published by Hazell, Watson, and Viney. Any account of Diaries for facilitating medical work in the coming year would be incomplete, indeed, which did not mention this one, an acknowledged favourite with medical men. Cassell's Lists and Account Books are so well known, and of so excellent a character, that they cannot fail to expedite the work of the busy practitioner. Amongst the most convenient time- and labour-saving of the Visiting Lists we have seen is that published by Mr. F. A. Davis, of Berners-street. It is very light, and requires but one entry a month.

THE LANCET.

LONDON: SATURDAY, DECEMBER 27, 1890.

THE ANNUS MEDICUS 1890.

THE events of the year, viewed from a medical point, have been in some sense so exceptional as to make it in many respects an *annus mirabilis*. At the very beginning of the year there were indications of the presence of an epidemic of influenza whose approach had been foreseen. Amongst the earliest cases were those of the Prime Minister and other officials of the Foreign Office. But it soon showed that it was no respecter of persons, and prevailed with a diffusion more complete and impartial than that of any epidemic since that of 1837, or within the memory of most living practitioners. It affected many other countries of Europe before it reached us. The mortality was light in proportion to the severity of the symptoms, which were indeed sharp, short, and either without catarrh or with an amount of catarrh altogether disproportionate to the severity of the other features. Another very distinguishing feature of the year was the announcement at the Tenth International Congress at Berlin by Dr. KOCH of his belief that he had discovered a fluid which was capable, in animals at least, of antagonising the life and progress of the tubercle bacillus, and of arresting the diseases caused by its presence. There was a prematurity about this announcement which must be much regretted. It is said to have been forced from Dr. KOCH by the highest authority in Germany. Be that as it may, it brought an expectant world to look to Germany for the cure of a disease which, in its phthisical form, is the cause of more misery and mortality than any other. The applicability of it to cases of phthisis has yet to be defined, and better progress would have been made if Dr. KOCH could have been allowed a longer time in the sanctity of his own laboratory and sick wards. The discovery is, at any rate, one of the most remarkable in the annals of biological pathology—if we may use such an expression. Such success as this at Berlin, and the similar ones of PASTEUR at Paris, made and matured through beneficent vivisection, and necessitating our *savants* to go and wait at the doors of French and German laboratories, are opening the eyes of the public of this so-called free country, *which has a reputation to lose*, to the folly of its legislation in discouraging Experimental Pathology, on the success of which control over the most frightful diseases depends. Public attention has been strongly directed to the abuse of charity in the administration of hospitals, through the investigations of the Committee of the House of Lords, and an inquiry of the same sort at Birmingham and Liverpool, from which we hope for some definite remedies. Another of the events of the year was the return of Mr. STANLEY from his anxious and adventurous, though finally successful, journey in search of EMIN PASHA. One feature of this Expedition, which excited unalloyed satisfaction and admiration, was the character and services of Surgeon PARKE, A.M.S., of whom Lieutenant STAIRS said he considered that he had saved the life of every white man in the Expedition, that he had saved his (Lieutenant STAIRS) life, and twice saved that of Mr. STANLEY. No wonder that the professional bodies indifferent divisions of the kingdom vied with each other in doing him honour, and that a remarkably representative gathering of the profession in London at the Criterion, presided over by the President of the College of Physicians, Sir ANDREW CLARK, entertained him at dinner. We must now, however, proceed to a more detailed notice of the different subjects in our Summary. No attempt to summarise the work and history of medicine in any given year can be complete. We can only deal with such a subject, however, under certain great heads and in a general way. Much meritorious work must remain unnoticed until it fructifies and comes up for consideration a year hence. Let no sound worker be discouraged. It is increasingly realised that the welfare of States and individuals cannot be advanced without heeding the discoveries and the advice of the profession. In this knowledge we go forward into the future, which has yet greater disclosures and rewards in store for all true students and practitioners of medicine; and in this cheerful faith, and with all good wishes, we proceed with our history of 1890.

Anatomy and Physiology.

In anatomy and physiology the chief works that have appeared are those of MACALISTER and of DEBIERRE on human anatomy, and of CHAUVEAU and ARLOING on the comparative anatomy of the domestic animals. Dr. SHUFELDT has written a monograph on the Raven, Dr. CUNNINGHAM another on the Common Sole; and new editions of GRAY and QUAIN and SHARPEY have appeared. Dr. MILLS has written a new and excellent work on Physiology, whilst new editions of the well-known treatises of FOSTER and MCKENDRICK are in process of publication in parts; a valuable work on Psychology has appeared in America from the pen of Professor BALDWIN. In France MM. JOLYET and VIAULT have published a text-book on Physiology; but in Germany, strange to say, the year has passed without the appearance of any new or important treatise, either in anatomy or physiology. MAC ALISTER'S text-book is in many respects original, and though not in its present state likely to supplant GRAY, QUAIN, and SHARPEY or ELLIS, may yet be regarded as a valuable contribution to scientific anatomy, and as a volume complementary to these works. The microscopist will welcome a new and much enlarged edition of the Microtomist's Vade Mecum, which Mr. A. BOLLES LEE has worked up to modern requirements in all questions relating to the preparation, staining, and mounting of tissues. Multitudinous as the examinations and descriptions of the blood-corpuscles have been, it would appear that new methods of staining, and the use of higher powers of the microscope indicate that some points still remain to be discovered, and Dr. A. EDINGTON has by these means been able to differentiate a minute form of corpuscle, hitherto overlooked, to which he has applied the name of "albocyte," and which he believes he has demonstrated to proceed from certain colourless cells or matricytes. These chiefly occur in the blood after food, have nothing to do with the

formation of fibrin, and are apparently one of the sources of the red corpuscles. Several researches have had the liver and the bile for their object. DISSE has satisfactorily demonstrated the presence of lymphatics in the liver, and has described them as forming sheaths around the capillaries. They appear to have a definite wall, composed of connective tissue fibrils lined by flat stellate cells, and are in immediate relation by their external surface with the liver cells. Much difference of opinion exists in regard to the action of the bile. MUNK, from his experiments, was led to believe that the fatty acids are actually better absorbed without bile than with it; and a case, recorded by Mr. MAYO ROBSON, of biliary fistula, shows, in opposition to the statements usually met with in text-books, that increase in body weight and good health are quite compatible with the entire absence of bile from the intestines. The quantity excreted in this case was about thirty ounces a day, so that there was no reason for believing that there might have been a second duct, by means of which a part of the bile entered the duodenum. From a medical point of view this case was interesting, owing to the fact that the administration of various supposed cholagogues seemed to diminish rather than to increase the quantity of bile excreted; and, finally, PONFICK has removed no less than three-fourths of the liver in a dog without harm to the animal. On the other hand, DASTRE has been led from his experiments to conclude that the presence of bile is indispensable for the lactescence of the lacteals; or, at least, that it plays an important part in that process. He, indeed, goes so far as to maintain that the pancreatic fluid alone is incapable of emulsifying fats, and causing the lacteals to become white and turgid. SHERIDAN LEA finds that leucin and tyrosin are formed in considerable quantities in the intestine during proteid digestion, and he suggests that, as amides play an important part in nitrogenous metabolism, these amidated acids supply new amidated compounds to take the place of those that are being constantly used up in the economy. A valuable contribution to Neurology has been made in the volume containing Professor OBERSTEINER'S full and accurate account of the Anatomy of the Central Nervous System, for an excellent translation of which we are indebted to Dr. ALEXANDER HILL, and to the value of which he has added by the addition of many notes. Of almost equal importance are the excellent memoirs by Professor D. J. CUNNINGHAM on the Structure of the Brain and on the Development of the Convolutions, and of SHERRINGTON on Outlying Nerve-cells in the Mammalian Spinal Cord. The functions of the brain have been studied by a band of observers, whose names are too numerous to mention, but who are well represented in this country by Dr. FERRIER and by Professors GASKELL and SCHÄFER and Dr. MOTT. Dr. FERRIER, in his Croonian Lectures, delivered at the Royal College of Physicians, has given in a clear and succinct manner the history of the doctrine of the localisation of the functions of this organ and an account of its present aspect. The whole subject, it must be admitted, is at present in a chaotic state, and many years of patient investigation, and a combination of the results of researches in anatomy, by experiment, and by clinical observation, are necessary before any positive conclusions can be drawn in regard to the existence even, and still more the position, of the centres now claimed to have been distinguished. The wide-reaching influence of the vagus has been extended by ARTHAUD and BUTTE even to the kidneys, their researches showing that strong faradisation of the distal extremity of this nerve below the heart diminishes, and may even arrest, the secretion of the urine, apparently by exerting a vaso-constrictor influence. The observations of HALE WHITE show that no rise of temperature results from injury to the white substance of the brain, whilst limited lesions of the corpora striata, and to a less degree of the optic thalamus, almost invariably cause a considerable rise of temperature on both sides of the body. The essay of Messrs. BOWDITCH and WARREN on Modification of Knee-jerk shows that a simple phenomenon long known and little heeded may, when carefully and scientifically investigated, supply much interesting matter for speculation in regard to the intimate processes taking place in the nervous system. These observations show that re-inforcement of the knee-jerk occurs if a voluntary muscular movement is made simultaneously with the blow on the patellar tendon, but if half a second be allowed to elapse a negative variation is induced which may almost extinguish the jerk, whilst it returns to the normal amount in the course of about two seconds. The knee-jerk cannot be excited in deep sleep. The effects of strong stimulation of the several senses were fully investigated. RUTHERFORD has given a detailed description of the structure of muscle, and sees no reason for departing from the time-honoured doctrine that the sarcous matter consists essentially of segmented contractile fibrils with an interstitial substance between them. It is to be hoped that the suggestions made by the American Committee on Anatomical Nomenclature will be adopted, which are to the effect that the terms "dorsal" and "ventral" should be employed in place of posterior and anterior, that the vertebræ to which the ribs are attached should be called "thoracic," and that the hippocampus minor should be henceforth named the "calcar." Many excellent papers on Embryology have appeared; such, for example, as those of HANS MEYER on the Primordial Kidneys; WIEDERSHEIM on the Development of the Urino-genital Apparatus; KUPFFER on the Development of Petromyzon Planeri; and R. KRAUSE on the Development of the Membranous Semi-circular Canals. But, perhaps, the most interesting are the two memoirs which have just appeared simultaneously in the *Quarterly Journal of Microscopic Science*, which agree in taking a new point of departure for the phylogeny of vertebrates. One of these, by Dr. WILLIAM PATTEN, is entitled the Origin of Vertebrates from Arachnids; the other, by Dr. GASKELL, is on the Origin of Vertebrates from a Crustacean-like Ancestor. These memoirs should be read with Mr. MALCOLM LAWRIE'S paper on the Embryology of a Scorpion which has recently appeared in the same journal. From a study of these several memoirs it will appear that a good case can be made out for the appearance of the vertebrate type as an advance and modification of arthropod instead of the molluscous type of invertebrata. The development of the sympathetic nervous system has been shown by PATERSON to take place in the mesoblastic tissue surrounding the embryonic aorta; and it is interesting to note that it is primarily unsegmented and unconnected with the cerebro-spinal nervous system.

The development of the eleventh and twelfth pairs of cerebral nerves and of the upper cervicals has been carefully worked out by CHIARUGI. Dr. BROWN-SÉQUARD has collected some remarkable facts from many different sources in support of his singular statements upon the dynamogenic power of the spermatic fluid of animals when either subcutaneous or intra-rectal injections have been practised. He has himself the most complete belief in its efficacy in senile debility.

Pathology.

The ever-widening sphere of pathological science has this year touched upon the domain of therapeutics in a striking manner, which has excited the attention of the whole world. In an address upon the progress of Bacteriology given at the Tenth International Congress in August, Professor R. KOCH announced that he had been long engaged in seeking for methods whereby the growth of the bacillus tuberculosis within the body may be arrested, and, although failing to procure such arrest by means of any known germicide, he said that he had discovered a plan to render the guinea-pig proof against tubercular infection; he further stated that he was about to apply his discovery to the human subject. In the middle of November, largely owing to the publicity which had been given to his investigations, he made a further publication, which is of historical value, as marking a distinctly new departure in medicine. For whatever may be the ultimate verdict upon the therapeutic value of his discovery, the fact that the material he employs has a certain elective affinity for tubercular tissue may be considered to be proved, and that of itself is a great discovery. For reasons into the validity of which we cannot here enter, Professor KOCH did not disclose the process whereby he succeeded in procuring this remarkable substance, but he has furnished many countries with samples of the liquid—a most powerful toxic agent; and its application in cases of tubercular disease is being actively carried on in all quarters of the globe. This discovery lends especial interest to the researches upon "protective inoculation" which have been prosecuted with vigour during the past twelve months. One is reminded therein of the interesting contributions made by the late Dr. WOOLDRIDGE upon the immunity conferred in anthrax by using the fluid derived from cultures of the bacillus anthracis in special fibrinogenous media (Reports of the Medical Officers of the Local Government Board, 1886); but the credit of the demonstration and isolation of so-called "toxalbumens" as products of bacterial growth belongs to BRIEGER (the discoverer of the alkaloidal ptomaines), ROUX, HANKIN, SIDNEY MARTIN, and others; and the demonstration that the protective qualities of culture fluids depend mainly on such proteïd products has been made by them in connexion with anthrax, and more recently still by BRIEGER and FRAENKEL in diphtheria. In the light of such investigations as showing the trend of inquiry into this important subject, it has been inferred that Professor KOCH'S anti-tubercular liquid may be, in part at least, derived from the cultures of the specific bacillus. In the development of pathological science it is clear that these laborious studies claim the front rank among the work of the year. Dr. ARMAND RUFFER has done good service in his lucid demonstration of the destruction of micro-organisms by amœboid cells, and his histological investigations upon diphtheria, which latter confirm the views of OERTEL as to the primarily local invasion by the diphtherial microbe. The pathogenic character of the bacillus discovered by KLEBS and LOEFFLER in diphtheria has been fully confirmed by the research of ROUX and YERSIN, who succeeded in isolating the "toxine" or virus, and whose research was followed up by BRIEGER and FRAENKEL in the manner above indicated. Like study has been made of tetanus (which may now be fairly ranked among the infective diseases) by KITASATO, who quite recently, in association with BEHRING, has published some striking results of acquired immunity (in animals) from this affection, as also in experimental diphtheria. Tuberculosis, quite apart from the recent declaration by KOCH, continues to enjoy a great share of the attention of the pathologist. In his lectures before the Royal College of Surgeons, Mr. WATSON CHEYNE entered fully into the histology of the tubercular affections of bones and joints—a subject also ably treated by Dr. ALEXIS THOMSON in the Reports of the Laboratory of the Edinburgh College of Physicians. The subject of tubercle was also discussed at the International Medical Congress, and in particular attention has been fastened on the possibility of its transmission through the consumption of milk and flesh of tuberculous animals. A Royal Commission, with Lord BASING as chairman, and Drs. BUCHANAN, BURDON SANDERSON, and PAYNE, and Professor BROWN, as members, was appointed in the summer to inquire into the evidence in support of such alleged transmission, and the measures of prophylaxis that might be enforced if necessary. The microbes of malarial fever, and especially the "hæmatozoon" of LAVERAN, have been studied and described by several writers, amongst whom may be cited MARCHIAFAVA and CELLI, CANALIS, GOLGI, and DOLEGA. The influenza epidemic of last winter gave rise to many a quest for a specific microbe, but there was no constancy in the results obtained by various observers, except perhaps as to the comparative frequency of the presence of the diplococcus pneumoniæ. As regards acute pneumonia, it would be wrong to pass without notice the exhaustive report of Dr. BALLARD upon the Middlesbrough epidemic, which contained the announcement of the discovery by Dr. KLEIN of a hitherto undescribed organism, a bacillus, which the same observer has also found in another epidemic of this disease at Scotter. Several contributions to the relationship of coccidia or psorosperms to cancer have been made during the year, notably by Dr. SHERIDAN DELÉPINE, Mr. J. HUTCHINSON, jun., Dr. VINCENT, Dr. WICKHAM, and a Danish observer, Dr. SJÖBRING. Nevertheless, the absolute identity of the bodies thus met with in conjunction with cancer cells with the protozoic organisms in question must be held to be undecided, especially in view of the statements quite recently made by Dr. W. RUSSELL at the Pathological Society upon the presence of fungoid spores in cancer. The *rôle* of the leucocyte in tissue formation has been anew studied by Professor ZIEGLER, and by Mr. BALLANCE and Dr. SHERRINGTON, with results that may be considered to be conclusive on this interesting point. Amongst other subjects we have only space to allude to the work done in pancreatic diabetes by LEPINE and by v. MERING and MINKOWSKI; the historico-pathological

study of vaccination by Dr. CROOKSHANK; the continuance of his research upon the pathology of pernicious anæmia by Dr. W. HUNTER, who has detected ptomaines in the urine in that disease, thus bearing out the truth of his original suggestion as to its pathogeny; the lectures on the Relation of Morphology to Pathology by Mr. BLAND SUTTON, as amongst some of the more important topics of the year. But obviously it is not possible to do justice to the enormous mass of material that issues from pathological institutes and laboratories, now so widely distributed, in a brief retrospect like this. It is, however, becoming more evident that advances will be made in the future rather on the physiological and chemical side of pathology than on its anatomical. Lastly, we may note that amongst the publications of the year have been the appearance of the sixth edition of Professor ZIEGLER'S well-known Text-book, the second volume of Professor KLEBS' great work on General Pathology, the completion of the Sydenham Society's translation of COHNHEIM'S Lectures, a new edition of Professors CORNIL and BABES' Treatise on Bacteria, the translation by the lamented Dr. WOOLDRIDGE of BUNGE'S Physiological and Pathological Chemistry, and Mr. WATSON CHEYNE'S book on Suppuration and Septic Diseases.

Therapeutics.

Although throughout the year there have been abundant indications of a general levelling up in the study of therapeutics, and although monographs have appeared devoted largely to a consideration of the present state of our knowledge of the treatment of some special symptom or disease, still the year 1890 is most likely to be memorable on account of its almost constant succession of stirring and startling reports. Some of these have first found their way into lay papers, and have been the cause of much random discussion of a futile character. Never perhaps has the medical profession had so much to contend with. Never has there been greater need for the more cautious reservations of science, when brought face to face with rash generalisations upon medical matters. Much good work has been done during the year, but it is overshadowed by the "alarms and excursions" incidental to the more moving excitements. The reasons for the somewhat spasmodic character of the year are very various. First and foremost stands the epidemic of influenza, which so often yielded satisfactory results with anything or nothing; while its discomforts of pain, fever, and languor appeared to leave little doubt about the propriety of employing strong remedies. Many powerful drugs soon passed into common use, and their reckless, haphazard employment by the public called forth frequent warnings in our columns. The report of the second Hyderabad Chloroform Commission rests upon a more sure footing than anything connected with the treatment of influenza, and it was soon greeted by discussion and opposition. The year almost commenced with the publication of this report, and although its most important statements were concerned with the action of chloroform upon the respiration and the circulation, the wave of its influence soon widened, and there has resulted an infinity of more or less important papers upon "Chloroform *v.* Ether,' some of them being of rather an antiquated type. The report of the Hyderabad Commission has been criticised by a Glasgow Commission. There was still, however, much to be said at the Berlin Congress by Dr. H. C. WOOD, and this called forth an explanation of the fallacies of his methods and conclusions by Surgeon-Major LAWRIE. The physiological position has been rendered more difficult by the statement of Professor MACWILLIAM, that chloroform causes a more or less sudden dilatation and enfeeblement of the heart, which render the rhythmic contractions ineffective. Upon the clinical aspect much has been written without producing harmony. The relative danger of the different anæsthetics seems still undecided; most anæsthetists, in London, at least, appear to prefer to use ether, though it has been pointed out that the danger of ether consists precisely in feeling too sure of its freedom from danger. Even at a recent meeting of the Medico-Chirurgical Society discussion wandered from the subject of the paper—respiration during anæsthesia—into personal preferences for various anæsthetics, attacks on the A.C.E. mixture as "diluted chloroform," and emphatic protests against "ether and all other abominations.' In short, although the year commenced well with a very painstaking and accurate report from the physiological or experimental standpoint, it ends with lamentable indications of the chaotic differences of opinion still rife from a clinical point of view. The excitement about the treatment of Phthisis is so recent that it is premature to attempt to estimate the gains and losses of the year. Dr. LATHAM, in his Harveian Oration, referred to the energetic treatment aroused by the discovery of the bacillus. First among the means devised for its destruction stands the revival of the old treatment with carbonic acid, even though the influence of overcrowding and bad ventilation was proved by statistics long before the communicability of consumption had received much scientific support. Balsam of Peru and various salts of copper have been said to give encouraging results. The beneficial influence of hot air has been vaunted and denied. A mild enthusiasm was expressed over the protective action of cyanides of silver and gold, this being possibly an indirect outcome of Sir JOSEPH LISTER'S description of the double cyanide; and in later days the universal reading world has been startled by the sensational reports of the "cure of consumption" by KOCH'S method. Whether in the future the true meaning attached to the English word is to obtain, or whether, more correctly, it will have to be regarded at best as merely "a treatment" of consumption, time only can show. The composition of artificial salicylic acid has been investigated, and the occasional toxic symptoms have been referred to a varying degree of impurity. This was physiologically examined early in the year by Professor CHARTERIS, and more recently it has been apparently identified by Professor DUNSTAN. Some uncertainty, however, has been expressed, as a substance of the same name, and with at least some of the same physical properties, has been recommended as a valuable antipyretic. Professor DUNSTAN has also published some important researches upon the chemical composition of the "double cyanide," and he accounts for some of the difficulties presented by this substance on the assumption of the "occlusion" of the cyanide of mercury in the cyanide of zinc. Sir JOSEPH LISTER has furnished a further communica-

tion upon the double cyanide, and other antiseptics have been introduced in aristol, pyoktanin, hydronaphthol, and various other substitutes for iodoform. Aristol is almost odourless, and does not stain the skin. Two kinds of pyoktanin have been described, a blue and a yellow, and for these it is claimed that they stain bacteria and destroy their activity. The new antipyretics introduced have not been very numerous or important; phenyl urethane is said to require caution, as its effects are similar to those of pyrodin. Phenacetin has been added to the Pharmacopœia, together with antifebrin and antipyrin, but the last mentioned is being less used for antipyretic properties, and more for cases of neuralgia and headache. An important paper by Professor FRASER upon exalgine as an anæsthetic appeared in the early part of the year, but another observer noted severe symptoms with cyanosis after the employment of this drug. Anæsthetic properties have also been ascribed to strophanthus; and a valuable summary of the present knowledge of cocaine, together with a list of cases with toxic symptoms or fatal results, was referred to in these columns. The class of hypnotics continues to grow, but the growth is not devoid of anxiety. Hypnal, derived from chloral and antipyrin, has been introduced; further researches have been made upon hyoscine, chloralamide, chloralimide, and sulphonal, and poisonous effects have been ascribed to the last. Antifebrin has been recommended as a hypnotic for children. A new remedy, orexin, has been said to promote appetite, but this is obviously a question which it must be difficult to determine. The action of strophanthus and the indications for its use have been further studied, while the relative influence of iodide of potassium and iodide of sodium has been somewhat elucidated. Reduced arterial tension, the result of treatment with mercury, has been explained to a certain extent. Apart from what has been above said of the new treatments of phthisis, several summaries of the present state of lung therapeutics have been made. Bronchitis, acute and chronic, has formed the subject of various monographs, while the routine treatments of hæmoptysis and their physiological bearings were summarised by Dr. ANDREW in his Harveian Oration. The use of olive oil in cases of biliary colic and gall-stone, and the diagnostic value of pilocarpine in protracted jaundice appear to be novelties worth consideration. In renal therapeutics several important and suggestive papers have been written, amongst which may be mentioned studies upon the value of calomel as a diuretic, upon saline injections in diabetic coma, upon caffeine and strophanthus, upon the elimination of various balsams in the urine, upon the effect of salicine and salicylate of soda on uric acid, and lastly, upon diuretin, the new diuretic. Further work has been carried on with iodine in small doses to allay vomiting, upon cannabis indica in various gastric disorders, upon Epsom salts in dysentery, upon phenacetin in typhoid and salol as a diagnostic agent. Bromide of gold, bromide of camphor, picrotoxin, and biborate of soda have been recommended in epilepsy, and cannabis indica, in its beneficial and injurious effects on the nervous system, has received attention. Ether has been advocated as a solvent for external applications, such as belladonna and menthol, and aristol has been used for psoriasis. Benzoate of mercury has been employed subcutaneously in syphilis, and the green iodide of mercury has been praised, and its omission from the Pharmacopœia deplored. Hydrastinin has been employed in uterine therapeutics with increasing confidence, and KOBERT has published a valuable paper upon ergot. The foregoing brief summary indicates the healthy vitality of the study of therapeutics. In spite of the spasmodic excitements of the year many new remedies have been introduced, and many of the old have been studied with advantage. Even with regard to the new, the wideness of range may be noted with satisfaction. Antipyretics and hypnotics no longer monopolise attention.

Surgery.

It is difficult to appraise correctly events and occurrences quite close to us in point of time, and it is not possible, at the close of a year, to point out with confidence exactly where, and how far, true progress has been made in the science or art of surgery during the preceding twelve months. But this year there is but one subject in the thoughts of all surgeons, and the question of the advance of surgery during the present year will be decided by the final verdict as to the value of KOCH'S remedy for Tuberculosis. Tubercle plays so large a part in the surgical pathology of all parts of the body that the introduction of a simple and certain "cure" for this disease is only paralleled by the discovery of the antiseptic treatment of wounds. At present it is too early to speak with full confidence of the results obtained. But there is good reason to believe that we are in possession of a far more speedy and certain remedy for lupus than any previously known. In cases of early tubercular disease of bones and joints also, KOCH'S liquid promises to be of real and great value, for it seems to arrest the morbid process in a way that is quite new in pathology, and so to shorten the duration of a case even under the most favourable conditions. Old tubercular sinuses also, where there is no great extent of disease, appear to heal up quickly and soundly under this treatment. How far "Kochin" is able to cope with advanced tubercular disease of glands, bones, or joints cannot yet be said; and we must be prepared to wait a long time before we can learn the extent and the limits of the powers of this undoubtedly potent remedy. By the side of KOCH'S great announcement all else sinks into insignificance, and it seems scarcely necessary to mention in detail other methods of surgical procedure. It is undoubted that the treatment of wounds is becoming better understood, and aseptic treatment of simple kinds is practised more generally, more thoroughly, and more successfully. In one or two directions special activity has been shown during the past year. We may mention the more extended application of litholapaxy for stone in the bladder in children, an operation which has been taken up with great favour by several surgeons. Some additions have been made to our experience in the surgery of the spine; displaced bone and carious bone have been removed, and trephining has been practised for crush of the spinal cord—of course, without much benefit. Excision of the rectum alone, or combined with removal of part of the sacrum, has been shown to be possible in cases where the malignant disease has

involved even the upper part of the rectum, and, although the operation has entailed extensive wound of the peritoneum, good recoveries have been obtained. Intubation of the larynx has been received with less favour here than in the home of its birth across the Atlantic, and the experience obtained of it so far has not been so strikingly successful as American statistics led us to anticipate.

Obstetrics and Gynæcology.

AMONG the work of the year in England may be mentioned the following: A series of papers by Dr. BOXALL on Fever in Childbed, read before the Obstetrical Society of London. These papers are based on observations made in the General Lying-in Hospital, and include a statement of results, both as regards mortality and morbidity, under the use of various antiseptic agents. The routine use of the vaginal douche is also discussed. At the same Society two interesting discussions have taken place—one on the question whether pregnancy should be ended in some cases of phthisis; the other on the question of hysterectomy for cancer. The point on which the answer to the latter question depends is one of pathology. It is said by some that the statement that cancer of the cervix is not apt to involve the uterine body is too wide, and that the body is involved so often that vaginal hysterectomy, rather than supra-vaginal amputation, is the proper treatment. The question in pathology is this: Does this extension ever take place except in a late stage, when the broad ligaments are already involved? On this answer depends the proper treatment. There appears to be a movement in Germany in favour of hysterectomy rather than supra-vaginal amputation, but the enormous numbers of cases recorded seem to us somewhat suspicious. We venture to say that such numbers recorded in towns which are mere villages compared to London, would not be equalled by the records of all the London medical schools put together. Either cancer is unusually rife in Germany, or Germans are too apt or Englishmen too reluctant to operate. The facts must be settled before long, and then we shall see. Some careful and valuable dissections of deformed fœtuses by Dr. DAKIN should also be named. In our own columns Dr. JOHN PHILLIPS has discussed the analgesic effects of antipyrin before and after delivery, and Dr. CHAMPNEYS' three Harveian lectures on Painful Menstruation have appeared. The question of the proper treatment of cancer of the uterus, referred to above, was also the subject of an address at the Berlin International Congress by Dr. JOHN WILLIAMS A summary appeared in our number for Aug. 23rd, p. 389. At the same meeting were also discussed the subject of Electrolysis for Uterine Fibroids, Antiseptics in Midwifery, and the Induction of Premature Labour. As regards the first of these, we think we are not far wrong in saying that electrolysis for the treatment of uterine fibroids is moribund in England. Other papers at the Congress were read by Dr. PAWLIK on a case in which the whole bladder was removed for papillomatous disease, the vulva being subsequently closed; on Hæmatocele and Hæmatoma, by Dr. VEIT; on the Sexual Life of Women after Castration, by Dr. KEPPLER, dealing with the results of forty-six cases, with seven deaths; two remarkable statements were made—first, that the conjugate diameter of the pelvis in all cases became shorter by from 2 to 3 centimetres, and that in no case was the sexual feeling abolished. In France the question of Cæsarean section has been discussed in a series of papers by Dr. BLANC; and Antisepsis in Obstetrics and Gynæcology by Dr. AUVARD. In America, Modifications of Perineal Operations are suggested by Drs. EDEBOHLS and EMMET; Electrolysis for Uterine Fibroids is discussed by Drs. MUNDÉ and PRYOR; Cæsarean Section by Drs. PALMER DUDLEY, JAGGARD, DONOHUE, and KELLY; Hysterectomy for Cancer by Drs. COE, KRIEG, and TUTTLE; Placenta Prævia by Dr. WENZEL.

Ophthalmology.

In the department of Ophthalmology the most important treatise that has been published is the Text-book on Diseases of the Eye, by HENRY D. NOYES, the Professor of Ophthalmology and Otology in Bellevue Hospital Medical College, U.S., which may be regarded as a worthy and authoritative representation of American views both in theory and practice. Other treatises of minor importance, but yet containing the results of much careful work, are those of COHN on the Uterus and Eye; of WEISS, who in the third part of his Essays on the Anatomy of the Orbit deals with the relations of that cavity in the various forms of the head and face; and LAGRANGE on Errors of Refraction. MADDOX and PRENTICE have suggested new methods of numbering prisms, which are easily accomplished, and will probably prove useful in practice; and Dr. ARCHIBALD PERCIVAL has devised some valuable improvements in the construction of bifocal lenses, both for presbyopes and myopes. Dr. BEAUMONT has issued a little *brochure* which supplies the learner with all he need know in regard to the Shadow Test—one of the surest and most rapid methods of determining the refraction of the eye. Dr. DEBECK, under the title of "American Ophthalmological Memoirs," has published a remarkably good monograph on persistent remains of fœtal hyaloid artery, the bibliography of which gives references to all the hitherto recorded cases of that condition. The chief ophthalmic surgeons who have passed away during the year are, perhaps, Dr. BECKER of Heidelberg, an excellent practitioner and a most genial man, and Prof. COCCIUS, the able Professor of Ophthalmology in Leipsic. The Bowman Lecture was delivered by Mr. HULKE, who took Sir WM. BOWMAN'S Life and Works for his text. Of new instruments we may mention one devised by LANDOLT, which is convenient for compressing and holding the lid in all blepharoplastic operations, enabling them to be performed with little or no hæmorrhage. MM. WECKER and MASSELON have devised an ophthalmo-statometer, by means of which accurate directions can be given by the ophthalmic surgeon to the optician in regard to the position and centering of the glasses ordered. M. LEPLAT has also devised an ingenious instrument for determining the position of the axis in cylindrical glasses, which is sometimes a troublesome proceeding. CHIBRET has devised a convenient case of glasses holding four concave and four convex lenses, by which all errors of refraction up to 15 dioptres can be determined. Some new antiseptics have been suggested, amongst which

the aniline dyes may be mentioned. They are, it must be remembered, highly poisonous unless thoroughly freed from arsenic. One of these, named "pyoktanin," made by MERCK, and used by STILLING, is said to arrest suppuration and promote the cicatrisation of ulcers, and deserves further trial. PANAS has investigated the local anæsthetic influence attributed to strophantine and ouabaine, neither of which, is however, likely to supplant cocaine, the former having apparently little or no action on the eye of man, though it slowly renders the eyes of rabbits insensitive; whilst the latter drug is too irritating to come into general use. A considerable outbreak of ophthalmia occurred in the early part of the year at the Hanwell Schools, showing either the introduction of the disease from without or the non-observance of the rules of hygiene amongst the school children. Few but those who are immediately concerned in such outbreaks know the anxiety and trouble they occasion, or the cost they entail when once a large number of the children are affected. Several observers have been struck by the frequency of ophthalmic affections during and after the epidemic of influenza which was so widely spread at the beginning of the year. Dr. CHISOLM of Baltimore has transplanted the cornea of a rabbit with fair success into a human eye; and M. COSTOMIRIS has drawn attention to the value of the ancient method—a method as old as HIPPOCRATES—of treating diseases of the cornea as well as of the conjunctiva by massage, either applied directly or through the lids with the tip of the finger. The subject of Cataract has of course attracted much attention, and the frequent changes made by the ophthalmic surgeons in their *modus operandi* are rather suggestive to outsiders that perfection has not been attained either in this country or abroad. Professor KNAPP of New York, whose experience has been very large, lays down the rule that simple extraction—that is, without iridectomy—is not only the best but also the safest method of removing cataract, and the statistics he gives in support of his assertion are sufficiently satisfactory. The subject of the artificial maturation of cataract, suggested by Mr. MCHARDY of King's College, has been warmly debated in the Ophthalmological Society, and is a question that must, at least for the present, be regarded as *sub judice*. The treatment of secondary cataract—one of the *bêtes noires* of ophthalmic practice—has been discussed by M. DUFOUR, who insists on the extreme importance of antisepsis in every case. M. ABADIE has suggested, though the practice seems to be of doubtful efficacy, that in cases of injury to the eye, followed by inflammation of a kind likely to induce sympathetic ophthalmia, the original site of the wound should be freely cauterised, whilst a dilute solution of the perchloride of mercury should be injected into the eye. In similar cases SCHEFFELS proposes the resection of the optic nerve, on the ground that the agent or agents inducing sympathetic ophthalmia travel along the sheath of this nerve. This proceeding is sound from a surgical point of view, since the view adopted by SCHEFFELS has been shown to be correct by the numerous and careful observations that have been made by Dr. BRAILEY. Dr. DARIEN recommends the adoption of the practice of intra-ocular injection of dilute solution of perchloride of mercury in cases of central choroiditis and of disseminated choroiditis, a proceeding we should imagine of doubtful propriety on account of the risk of setting up inflammation. SULZER and MACNAMARA have called attention to the ocular troubles that accompany paludism—the former as seen in India, the latter in Java,—and which consist, in many instances, of turgescence of the optic disc, haziness of the circumpapillary region, and deposit of pigment, leading collectively to atrophy of the optic nerve, whilst in others there is diffuse infiltration of the vitreous humour, in both instances with considerable reduction of the sharpness of vision. Dr. FARQUHARSON, in the House of Commons, has called attention to the necessity for proper investigation of the sense of colour in those who are entrusted with the lives of others depending on their recognition of colours, as in the case of sailors and engine-drivers, and there is little doubt that the Board of Trade will adopt stringent rules under the recommendation that will be made by the scientific committee appointed by the Royal Society.

Dental Surgery.

The view that dental caries is always associated with and probably caused by the action of micro-organisms has been further confirmed after an exhaustive inquiry by Mr. HOWARD MUMMERY into the researches of many investigators, a *résumé* of which he gave at the International Medical Congress at Berlin. From this it would appear that no one special coccus or bacillus has been proved to be the active agent, as at least six varieties have been observed; that decalcification is produced by an acid resulting from the action of these micro-organisms upon certain carbo-hydrates, and peptonisation is due either to the direct action of the protoplasm of these organisms upon the decalcified dentine or to the action of a ferment which they produce. Sugar being the food of these acid-forming micro-organisms, all food containing it, or starch, which is converted into grape sugar in the mouth, tends to increase the liability of the teeth to decay, thus substantiating to a certain extent the popular maxim that sugar destroys the teeth; but sugar is freely soluble and easily washed away, whilst starchy substances are sticky, cling to the teeth, and are therefore more likely to do harm. Some new apparatus for the administration of anæsthetics for dental purposes deserve notice. Dr. DUDLEY BUXTON now uses a "silencer" in connexion with the flask of compressed nitrous oxide gas, so that the noisy rush of gas, which is so disturbing to a sensitive patient, is avoided; also a special contrivance to filter the exhalations passing into the Catlin's bag, thus guarding against the possibility of the infection of phthisis, syphilis, &c., passing from one patient to another. The administration of nitrous oxide *plus* oxygen has heretofore been confined to hospitals, owing to the cumbersome nature of the gasometers, but Dr. FREDERICK HEWITT, who has made this subject his special study, has designed a portable apparatus the efficacy of which he demonstrated at the meeting of the British Dental Association at Exeter. The question of the physiological action of nitrous oxide is still unsettled. Dr. GEORGE JOHNSON maintains that it is simply a rapidly asphyxiating gas, and the anæsthetic action is due to its deoxidising influence. Some experiments which might lead to the elucidation of this

problem have been performed with nitrous oxide, nitrous oxide and oxygen, and pure nitrogen, but the results have not yet been published. Some cases of dental operations, performed while the patient was in a hypnotic state, have been recorded. Not only was there no consciousness of pain, but the subjects were able to raise their mouths at command without being awakened from their hypnotic sleep. So far, this seems "success," but the procedure is open to considerable objections. The extraction of a tooth is a very trivial operation, and with nitrous oxide gas may be described as a mere "formality" rather than an operation, whereas the hypnotising of a patient has a profoundly demoralising effect. A new antiseptic introduced during the current year is hydro-naphthol, which is highly spoken of. Peroxide of hydrogen (H_2O_2), a powerful germicide, but very unstable in composition, will, it is said, retain its properties if mixed with corrosive sublimate. Hydrarg. perchlor. itself, notwithstanding the great disadvantage it possesses of eroding steel instruments, is found of the greatest value, and will often succeed in cleansing a foul root where iodoform, carbolic, and other antiseptics have failed. Dr. HARLAN of Chicago classifies antiseptics under two heads, albumen coagulants and albumen non-coagulants. This is a distinction worthy of note, for a non-coagulating fluid such as eucalyptus oil, from its capability of penetrating the dentinal tubes, may be practically of greater efficacy than a more powerful germicide which coagulates albumen. The experiments of Dr. MILLER of Berlin tend to show that some filling materials have antiseptic properties, especially copper amalgam and tin, probably due to the salts formed. Those enormous gold stoppings which took from three to four hours to insert are becoming more rare, other methods equally advantageous to operator and patient taking their place. Thus combinations of amalgam and gold and tin and gold are frequently used. Amalgam has been rendered capable of much more certain results since the introduction of the "matrix," which is a piece of metal temporarily placed in position, so as to form a fourth wall to the cavity, and thus allow great pressure to be brought to bear upon the stopping during its introduction. Gold crowns are steadily gaining favour; and to see a broken-down molar restored in this way so as to become a valuable masticatory organ is to see one of the great advancements in the dental art. Porcelain inlaying as a substitute for gold fillings in front teeth has not received the amount of attention commensurate with its artistic merit, probably on account of the minute detail required. Dr. BULKLEY published a series of cases of the transmission of specific disease by means of dental instruments. Such cases are fortunately rare, but too much care cannot be exercised to avoid the possibility of contagion by scrupulous cleanliness and the use of antiseptics. At the Dental Hospital of London a new departure of very considerable import has been made—viz., the supply of artificial teeth to necessitous poor. This fills a want long felt, and if zealously guarded from abuse will be a great boon to the community.

Sanitation and Public Health.

So far as general mortality is concerned, the year 1890 bids fair to exhibit no excess of death. It is true that during the first quarter of the year the death-rate somewhat exceeded the average, but during the two succeeding quarters for which completed returns have been received the reverse was the case. Amongst the zymotic diseases two or three are especially notable. We have alluded elsewhere to the memorable epidemic of influenza. Small-pox is still remarkably quiescent amongst us; indeed, during the three quarters ending Sept. 30th, only fourteen deaths had occurred from that disease in the United Kingdom. On the other hand, diphtheria maintains its tendency to increase; during each quarter the mortality caused by it has been in excess of the average, and a considerable portion of the excess has taken place in the large towns and cities. Indeed, the rate of mortality from diphtheria in the twenty-eight great towns now regularly exceeds that prevailing in the country as a whole. This tendency of the disease to manifest itself especially in urban districts, in contrast to its former habit of favouring the rural areas, has been remarked on before, and the experience of the past year goes to show that this change in its incidence is on the increase. Unfortunately, this change of habit in no way helps to clear up the many obscure points attaching to the etiology of this disease; and the constant practice of assigning the urban outbreaks to such defective sanitary conditions as mere faulty drainage and sewerage in no way helps to solve a difficulty which is the more remarkable because our large towns and cities never were in a better state in this respect than they have been during the past few years. Inquiries into isolated epidemics have evidently failed to remove the difficulties with which the question of the causation of diphtheria is associated, and the demand recently made by the Chelsea Vestry for a comprehensive inquiry by the Local Government Board into all the circumstances associated with the growing prevalence of the disease is one that will be endorsed by the medical profession and the community in general. Diarrhœa, though it caused 9691 deaths in the third quarter of the year, was less fatal than it has often been at that period—a circumstance that was probably due to the fact that during the months of July and August the rainfall exceeded, whilst the temperature fell short of, the average during the same months in previous years. Amongst the local epidemics which have occurred during the year, two prevalences of enteric fever have called for more than ordinary attention, because of the suspicion that in their causation they have been related to public water-services. One was at Chester, and the other amongst a number of towns and villages situated in the Tees valley, and receiving their water-supply from that river. In both cases crude sewage was discharged into the rivers from which the public drinking-water is derived, and in both instances an attempt was made to show, on chemical grounds, that the warnings as to risk which had been issued were not needed. In the Chester report Dr. BALLARD unhesitatingly declared that no chemical search can detect the contagious principle of enteric fever; much the same was announced by Dr. EARRY in the case of the Tees epidemic, and distinguished chemists have frankly admitted the same. But, notwithstanding this, samples of water are at times collected long after the date when the contagious principle in question must have been in operation as a cause of the outbreak, or single samples are put to the

test when it must be obvious that a particulate infection cannot possibly be uniformly distributed through a large bulk of water, such as that flowing in a river, and inferences of safety are drawn from the chemical analyses of such samples. This year's work, so far as it has gone, has tended to prove the futility of deductions based on such haphazard experiments; and we are again reminded of the words which the medical officer of the Local Government Board used as to this after he had submitted to certain well-known chemists samples of water which had been deliberately contaminated with enteric fever discharges—viz.: "We must ..... go beyond the laboratory for evidence of any drinking-water being free from any dangerous pollution. ..... The chemists can, in brief, tell us of impurity and hazard, but not of purity and safety." Another disease which deserves the serious consideration of health officers and others is epidemic pneumonia, which, since the Middlesbrough outbreak, has during this year appeared in Lincolnshire. We have so recently commented on the official report which was submitted by Dr. PARSONS on this subject that we would only call attention to it again by way of history, and with a view of recalling the necessity for being on the look-out for a very fatal affection, the symptoms of which, in initial cases, are often obscure, and the causes and prevention of which are at present by no means clearly understood. Amongst foreign epidemics, the cholera prevalence in Spain has been that which has had most immediate concern for Europe and this country. Beginning in May, in the province of Valencia, the disease had by the end of July caused 239 deaths; it subsequently spread to the adjacent provinces, and scattered outbreaks occurred also in more distant parts of the kingdom, the epidemic reaching its height during the third week of August. In September a decline set in, and by the close of November the prevalence was practically at an end, the attacks which had up to that date been heard of and recorded amounting to some 5500, and the deaths to 2840. As to permanent preventive action in Spain, but little is as yet known; but it is satisfactory to note that nothing that can be regarded as an extension of the epidemic to adjacent countries took place, and that the measures adopted along the Franco-Spanish frontier, and which were most successfully administered, very largely partook of the character which has been so long advocated in this country, the vexatious and useless restrictions of antiquated quarantine regulations being in the main discarded. The cholera epidemic in connexion with the Mecca pilgrimage appeared likely at one time to become a source of distinct danger to Egypt and to Europe, but fortunately no extension of the disease took place from the pilgrims, although it is as yet difficult to state what was the enormous cost of life to those attending the pilgrimage by which this result was attained. Probably the disease was taken into Arabia by means of those who travelled to Mecca and other holy places from Mesopotamia and Persia, where cholera had been epidemic, and from those sources there has evidently also been that extension of the infection into northern Syria which even now is a source of anxiety to south-eastern Europe. In Japan cholera has also been again the cause of a terrible death-roll, no less than some 29,000 deaths being attributed to that disease. News also comes this month to the effect that cholera is widely prevalent in Guatemala. Thus far, 12,000 attacks are stated to have occurred there, and from the city of Guatemala alone 1200 deaths are reported since the beginning of the last week of October. In so far as legislation is concerned some substantial progress has been made. The system for the compulsory notification of infectious diseases has made rapid strides; it has indeed gone beyond the provision of measures by which action can be taken on the information which the system secures, for many authorities adopting it have not even the means for isolating such first cases of infectious diseases as they may hear of. But, judging from the reports of health officers submitted to us, it is almost everywhere working as smoothly as could have been anticipated; it is, however, clear that its permanent success must be largely dependent on the strict maintenance of a high standard of professional courtesy on the part of those who have official status in the matter. The Public Health Acts Amendment Act, 1890, the Infectious Disease (Prevention) Act, 1890, the Housing of the Working-classes Act, 1890, all tend to advance public health, and to facilitate the work of sanitary authorities and their officers. The Census (England and Wales) Act, 1890, is prospective. Much useful information is expected to be obtained under it next year; and if the rumour that the immense labour which it involves is to be under the immediate superintendence of Mr. NOEL HUMPHREYS, of the General Register Office, turns out to be correct, great confidence may be expressed in the results to be obtained, unless, indeed, the work is hindered by such official parsimony as in 1881 deprived one of the volumes of its much-needed and accustomed index. The question of a quinquennial census is unfortunately relegated to a future, but we trust not a very remote, date. The Royal Commission on Vaccination continues its sittings. It has issued two reports, and a third is shortly expected; but it is clear that it has undertaken a task that will involve much of that patience and discrimination which may fairly be expected from the eminence of its chairman and leading members.

Medical Jurisprudence.

The year 1890 has furnished fewer medico-legal cases of surpassing interest than its predecessor. There has been the ordinary run of poisonings—accidental, suicidal, and homicidal—but no notable tragedy comparable to the crime brought home to Mrs. MAYBRICK in 1889. A curious instance of partial failure of justice was recently exhibited in the case of a man who was indicted for the wilful murder of his two children and the attempted murder of his wife by the administration of arsenic in a rice pudding. As the law at present stands a wife cannot give evidence against her husband on trial for the capital offence; and as the testimony beyond that of the wife in this case was insufficient, the prosecution against the alleged murderer had to be abandoned. He was convicted, however, of administering poison with intent to murder, and sentenced to fifteen years' penal servitude. A fatal case of arsenical poisoning happened in Ireland, where a female "cancer curer" treated a case of carcinoma mammæ with a plaster impregnated with the poison. The arsenic was absorbed in large quantity into

the system. Under the head of "mercurial poisoning" may be cited the death of Mrs. MARSHALL HALL, caused by an unqualified Belgian practitioner in attempting to procure criminal abortion by the injection of a corrosive salt of mercury into the vagina. The prisoner was convicted and sentenced to fifteen years' penal servitude. At the necropsy the kidneys were found affected in the manner described by KLEMPERER in his experiments on rabbits and dogs. Poisoning with *lead* has been emphasised by the contamination of the public water-supply in Sheffield by the carbonate of the metal absorbed from the service pipes. At the Oldham Infirmary a woman aged sixty was killed by the accidental administration of about ninety grains of chloral owing to the insufficient directions on the dispensary labels. Several cases have been reported from the Continent of dangerous symptoms arising from the use of antifebrin—a valuable drug, but one to be cautiously given. An unusually large number of deaths from chloroform have occurred during the year. This can hardly be due to greater laxity in administering the anæsthetic. More probably it is owing to the extended use of the drug, consequent on the report of the Indian Commission that it is rather a respiratory than a cardiac poison. In several instances recorded in our columns, however, the opinion was advanced that there was primary heart failure. Standing out prominently in the list of wilful homicides are the Crewe and Hampstead murders. In the former two youths killed their father, the murder being coolly planned beforehand. The Home Secretary advised Her Majesty to commute the sentence on the younger of the two criminals, but the elder expiated his offence on the gallows. The unhappy woman, MARY ELEANOR WHEELER, who has just suffered the extreme penalty of the law for the murder of Mrs. HOGG and her infant child, was alleged to have been subject to epileptic attacks. The truth of the allegation and its possible relation to the tragic event were no doubt duly considered by the Home Secretary, who did not, however, see reason to interfere with the carrying out of the sentence of death.

Royal College of Physicians.

The question of the reconstitution of the University of London has largely engaged the attention of the College during the year. Having adopted a report declaring the position in which the College stood with regard to this question, a conference was held with the sister College with a view to joint action being taken; but eventually a radical difference of opinion upon the relationship of the proposed Examining Board for pass degrees to the Colleges and the University resulted in each College sending an independent reply to the Senate. As yet, however, no further conference with the University has been held. The action of the General Medical Council with reference to diplomas in Public Health was not altogether approved by the College, which considered that the details of regulations for such examinations might well be left in the hands of the bodies conferring the certificates. Amongst other matters which received attention during the year were the conditions of practice by English physicians in France, and the claims and position of army medical officers, concerning which a deputation headed by the president interviewed the War Secretary. A code of regulations for the use of the fever hospitals in London as places of clinical study was drawn up by the College. A by-law was passed requiring the consent of the College to be obtained before any Fellow, Member, or Licentiate could be permitted to resign his connexion with the College. Another interesting episode in the year's proceedings was the vote taken in a large Comitia practically declining to recognise officially the action and properties of the "remedy" for tuberculosis discovered by Professor KOCH. The subject was dismissed by the "previous question" being carried by a large majority. The work at the new laboratories founded by the two Colleges began this year, Dr. SIMS WOODHEAD being appointed director. The Milroy Lectures were delivered by Dr. A. RANSOM, who took for his subject the Etiology and Prevention of Phthisis; the Lumleian Lectures on Convulsive Seizures were given by Dr. HUGHLINGS JACKSON; the Gulstonian Lectures by Dr. G. N. PITT, on Some Cerebral Lesions; and the Croonian by Dr. FERRIER, on Cerebral Localisation. Dr. SAUNDBY gave the Bradshaw Lecture on the Morbid Anatomy of Diabetes, and the Harveian Oration was delivered by Dr. JAMES ANDREW. The Murchison Scholarship was awarded to Mr. BEDFORD PIERCE. The College sustained the loss of some of its most eminent fellows by death, including Sir W. GULL, Dr. JULIUS POLLOCK, Dr. FINCHAM, Dr. MATTHEWS DUNCAN, and Dr. HANDFIELD JONES. Sir ANDREW CLARK was re-elected President, and it may be mentioned that, in addition to the zealous manner in which he has continued to discharge the duties of his office, he presented the College with a valuable reference library for the use of its examiners.

Royal College of Surgeons.

At the Royal College of Surgeons the year which is closing has not been remarkable for any momentous change in its history. Indeed, had it not been for the activity of the Associations of Fellows and Members, the routine which has characterised the proceedings of the Council might be called dignified but monotonous. The annual election of members of the Council was held in July, and the advantage of the new method of proxy voting was for the second time exemplified. The number of votes recorded at this election was 527 (as against 600 last year and an average of under 300 for the elections of some years preceding that); of these 372 voted by means of the voting papers. Only one voting paper was invalidated, and that was because the sender had omitted to sign his name. Twelve voting papers arrived too late. There were three vacancies to be filled at this election, caused by the retirement of Messrs. JOHN CROFT, JOHN MARSHALL, and HENRY POWER; Messrs. W. MITCHELL BANKS, MARCUS BECK, and JOHN LANGTON were elected to succeed them. It is a curious fact that amongst the number of votes recorded for Mr. W. MITCHELL BANKS there were no less than fifty-eight plumpers. Mr. THOMAS BRYANT succeeded Mr. JONATHAN HUTCHINSON as President of the College, and in that capacity presided at the annual meeting of Fellows and Members which was held in the theatre of the College on Nov. 6th, and, following the example of the late President, made a statement to the meeting when presenting the annual report of the Transactions of the Council. In this address, as we have already pointed out,

he dealt entirely with such matters as the enlargement of the College premises, details concerning the library and museum, educational changes, the attitude of the College towards the scheme of the University of London, the Midwives' Registration Bill, and the encouragement of scientific research. Controversial subjects were carefully excluded. To the resolution of the meeting that immediate steps should be taken to forward the introduction early in the next Parliamentary session of a Bill to amend the constitution of the College, so as to secure for the Members a just representation in and upon the governing body of the College, a reply from a later meeting of the Council was returned (as after the meeting of last year), "that they considered that with the granting of the Supplemental Charter the matters in contention should be allowed to rest." Sir W. MAC CORMAC and Mr. THOMAS SMITH were elected Vice-Presidents. The Committee of Management of the Conjoint Examining Board of the two Colleges has defined the course of study for the candidates for the diploma in Public Health, and laid down regulations for the employment of extra time by the student in the performance of clinical work. Changes have also been made in the synopsis of subjects required for the first examination in chemistry and chemical physics, and some of them eliminated as superfluous. The proposal to make attendance on a course of Ophthalmic Surgery compulsory and examination in that subject part of the final examination for the membership was negatived by the unanimous vote of the Court of Examiners, on the grounds that the present arrangements for testing the knowledge of candidates in that subject are sufficient, and that the fact that candidates are liable to be tested in the use of apparatus employed in the various special surgical departments has more effect than the enforcement of attendance on them. A committee of the Council of the College received a deputation from the Association of Fellows, and the following requests were made on behalf of the Association: 1. That the Fellows should be allowed the privilege of meeting within the walls of the College, and of being convened separately from the Members, at least twice a year, to consider and deliberate upon the affairs of the College. 2. That the proxy voting papers should be issued to all the Fellows with the names of the candidates for the vacant seats in the Council, whether the papers were applied for or not. 3. That the Council should take the sense of the Fellows of the College before concluding any arrangement with the University of London. After consideration the Council replied: 1. That they had decided to take legal opinion as to whether the Council possesses the power to call a meeting of the Fellows independently of the Members. 2. The Committee appointed on the subject reported, and the report was adopted by the Council, that no changes in the present system were to be recommended. 3. That it was not in their power to grant the request of the deputation. With regard to the University of London scheme, it has been decided that no advantage would be gained by any further conference between the two Colleges; but that, if desirable, the delegates of the College of Surgeons were prepared to discuss the matter further with the committee of the Senate. The extensive alterations and improvements in the College buildings, chiefly in the museum, have been continued, and are almost completed. The new museum is quite a model of its kind, and will form a most welcome addition to the other rooms, being spacious, well-lighted and warmed. The series of sketches and photographs of pathological conditions will be placed there, in addition to specimens of morbid anatomy and the teratological collection. The library is well patronised by members of the profession, who show their appreciation of the comfort of the room and of the excellent arrangements of the librarian. In the exercise of its right and duty to investigate and punish those guilty of infamous conduct in a professional respect, the alleged misconduct of some members was under consideration and two of them were deprived of their diplomas. Further grants of money were given towards the completion of the laboratory and purchase of apparatus at the Examination Hall, which is supported by the two Royal Colleges, and permission given to suitable applicants to work there. The Bradshaw Lecture was delivered by Sir SPENCER WELLS. At the request of the Committee of the National Leprosy Fund the Council appointed Mr. A. A. KANTHACK as their representative to proceed to India and investigate with others the disease of leprosy in that country. Mr. J. H. TARGETT was appointed Pathological Curator of the Museum, in succession to Mr. EVE, who resigned. The Jacksonian Prize was awarded to Mr. W. G. SPENCER, F.R.C.S., for his essay on the diagnosis, pathology, and surgical treatment of intracranial abscess and tumour. From the Calendar of the College it appears that the income from all sources for the year ending July, 1890, amounted to £37,871, the largest receipt, £18,653 16*s.* 6*d.*, being from candidates' fees. The expenditure for the year amounted to £37,139 10*s.* 2*d.*

Army, Navy, and Indian Medical Services.

As regards the public services, the past year has been more remarkable for what has not been done than for any measure which has been adopted for their improvement. The new measures introduced were: in the beginning of the year a Royal Warrant authorising the retention in the service of Surgeons-General till the age of sixty-two, should it be considered by the Secretary of State for War that the interests of the service would thereby be materially advanced; and subsequently the abolition of the examination of Surgeons-Major before they could be considered eligible for promotion to the grade of Brigade Surgeon. At a later period the Army Sanitary Committee, which had fallen into abeyance, was reconstituted, and Surgeon-General MARSTON, C.B., Brigade Surgeon NASH, and Sir C. CAMERON were nominated as the medical members. But there has been an entire absence of action in the direction of carrying out the recommendations of Lord CAMPERDOWN'S Committee, except that a new board of examiners of candidates for the Navy was appointed. On all the important points involved in them as regards the Army Medical Service, Mr. STANHOPE stated in the House that he did not propose to give effect to the recommendations involving expenditure, nor would he accept the system of compound titles, which, in the opinion of the committee, would have adequately indicated the professional status of the medical officer and his position with reference to the

combatant officers. This decision naturally excited a strong feeling of dissatisfaction in the service, and at the same time evoked the sympathy of the profession generally. As a result of this, memorials were addressed to the War Minister by all the licensing bodies, and a strong deputation of representatives from them, initiated by the Royal College of Physicians, waited upon him to press the claims of the Army medical officers for a removal of the grievances, the existence of which Lord CAMPERDOWN'S committee had reported to have been established, and for which it had recommended remedial measures. To this deputation Mr. STANHOPE made the usual answer, that he would give their representations his serious consideration. The question was afterwards brought forward by Dr. FARQUHARSON and Sir W. FOSTER in the debate on the Army Estimates; but, on an appeal from Mr. STANHOPE and Mr. W. H. SMITH, the discussion of the subject was postponed to afford time for consideration. Mr. STANHOPE has not yet given any indication of his intentions; but we sincerely trust, in the interests of the soldier as much as those of our professional brethren, that he may, in the course of the coming year, see his way to remove those grievances which have been proved to exist, as detailed in the report of the committee which he nominated himself for the purpose of making a searching inquiry. The subject of healthy barrack accommodation has attracted considerable attention during the past year, and a large sum of money has been taken for the purpose of improving it. Mr. STANHOPE, in his statement to the House, shifted the responsibility for the disgraceful state of the barracks from the War Office to the Lords of the Treasury, who cut down the estimates to a point much below that of efficiency. But we greatly doubt whether the War Office ever brought fully under the consideration of the Treasury the very strong representations which were continually being made on the subject by the medical officers. We trust that the revelation of the insanitary conditions under which our soldiers are too often placed may have the effect of gaining from the authorities a more practical attention to the sanitary reports and recommendations which are periodically received by them from the medical officers. The reconstituted Army Sanitary Committee will, we presume, be consulted on all the plans for new barracks and schemes for the improvement of old ones, and, if their recommendations are accepted and carried out, we have no doubt much of the muddle which has characterised the doings of the Barrack Department will in future be avoided. In September an order was made by the Secretary of State for India that in future it should be a condition attaching to the appointment of all medical officers to the Indian service that, in the event of their retiring on pension under thirty years' service, they shall be liable, until they attain the age of fifty-five years, to be recalled to duty in case of any emergency. This new condition appears to us to be alike unjust and injudicious. All who have any knowledge of the Indian medical service know that many of the officers retire before they complete thirty years' service because their health has suffered from continuous residence in India, often at unhealthy stations, and in many instances from field service. It seems unjust that men who have given up all claim to promotion and to increased pension with a view to avoid the further deteriorating effects of a tropical climate, and who make all their arrangements in accordance with this object, should be liable to be recalled to serve in a climate which has already proved so injurious to their health. The case of medical officers at home, on the analogy of which, we presume, the regulation has been framed, is totally different, as their return to service does not involve the risk attendant on an unhealthy climate. The new rule is injudicious, because there can be no doubt it will have the effect of deterring many eligible candidates from coming forward to compete for appointment to a service the retirement from which, after twenty years' good service, is hampered with a condition of so unsatisfactory a character.

The General Medical Council.

The General Medical Council held its two usual meetings. The first extended from Tuesday, May 27th, to Friday, June 6th inclusive. A session of ten days has happily of late years been unusual. It is probable that by a better arrangement of business and a restraint of oratory this time might have been shortened. But two or three questions of the first order of importance had to be discussed. The Council acquiesced in the order of the Privy Council that the second part of the Medical Act, having reference to the registration of colonial degrees, be applied to the colony of Victoria in Australia, and in particular to medical degrees granted by the University of Melbourne. The Council was occupied for some time in considering a petition with reference to diplomas in Public Health granted almost wholesale to candidates, and, after an examination, in the opinion of the petitioners quite inadequate. The contention of the petitioners was not seriously denied by the University. The Council referred the subject for consideration to a committee, the chairman of which was Sir WALTER FOSTER. This committee found the examination defective. The Council adopted its report, and resolved to forward it to the Court of the University of Glasgow, with an intimation that the Council would not recognise those diplomas as answering to the intention with which they had been made registrable. Some of these diplomas had been already registered. The most serious act of the Council at its May meeting was to pass the following resolution:—"That the course of professional study after registration should occupy at least five years *conditionally*." The word we have italicised was to safeguard the fifth year for strictly clinical and practical work, which was done by subsequent resolutions. This extension of the time of medical education has been long expected, but it has been precipitated chiefly by the demand of those medical educationists who have exposed defects in practical teaching. Much diversity of opinion exists as to the use of this precious year, but there is a practical consent that the Council has done a right and proper thing in enjoining it. At the November meeting the Council sat five days, beginning on Tuesday, Nov. 25th. The Council received with acquiescence the order to regard New South Wales as under the second portion of the Medical Act of 1866, and ordered the registration of graduates of the University of Sydney. Several cases of alleged professional misconduct were heard, and one registered person was removed from the Register, WILLIAM MONTAGUE HALL WELBY, on

the charge of issuing handbills, with the view of obtaining and carrying on an objectionable practice, and of carrying on such practice in conjunction with an unqualified person. The University of Glasgow reported that it had held an examination, to which the candidates who had passed in October, 1889, and whose examination was objected to by the Council, had been invited. A few passed the examination. The Council expressed its satisfaction with the course taken by the University, and so ended an incident which has probably been as distasteful to the Council as to the University of Glasgow. One principal feature of the meeting was a debate, on the motion of Dr. GLOVER, to increase the amount of practical and clinical midwifery in medical education. He was unsuccessful. The absurd recommendation of the Council requiring attendance on twelve cases of midwifery, or, strictly speaking, on only three, as equivalent to three months' pupilage in a lying-in hospital, still holds. But he has given due notice that he will raise the question again at the next meeting. An addendum to the Pharmacopœia of 1885 was authorised by the Council, containing fifty or sixty new drugs or preparations, most of which are already much used by practitioners. One of the last acts of the Council at its November meeting was to appoint a committee to consider the provisions of any Bill for the Registration of Midwives which may be submitted by the Government to the Council.

A Teaching University for London.

As a majority of the Senate of the University of London were in favour of meeting the view expressed by the Royal Commissioners that the existing University should be so reconstituted as to become a Teaching University for the metropolis, with University and King's Colleges and the London schools of medicine as constituent colleges, whilst continuing to discharge the functions of an Imperial examining board, the early part of the year was spent in drawing up schemes and negotiating with the bodies interested in a settlement of this question on this basis. On Aug. 11th the registrar of the University wrote a letter to Sir CHARLES PEEL, clerk of the Privy Council, detailing the various steps which the University had taken, and stating that the Senate regretted that they were not in a position to make a final report, as the vacation was imminent. The proposals contained in the "further revised" scheme of the Senate of June 25th, 1890, subject to some modifications in detail, had been accepted by the Councils of University and King's Colleges, and a standing committee was proposed for the superintendence of University teaching in London in Arts and Science, and, on this understanding, these colleges agreed to become constituent colleges of the University. "There shall be a standing Committee of the Senate for the Faculties of Arts and Science in connexion with the constituent colleges. This committee shall consist of the President and Principal of University and King's Colleges, of the Fellows (four) elected by them, of the six Fellows elected by the Faculties of Arts and Science, and of ten other Fellows to be elected by the Senate annually. The business of this committee shall be to promote the organisation, improvement, and extension of University teaching in Arts and Science in and for London, including the establishment of professorships and teacherships in London, and to discharge such functions in relation to the constituent colleges, and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them." The students from colleges not in or near London were to be under the control of another standing committee elected by the Senate annually, but this Committee was only to discharge the necessary functions relating to examinations, and other standing committees were to be appointed for the Faculties of Medicine and Laws. University and King's Colleges, being so strongly represented on the London side, would obviously have great influence in directing not only the teaching of the metropolitan students in Arts and Science, but also the examinations, especially as arrangements were to be entered into by which a college professor or teacher in the subject was to be joined with an examiner appointed by the Senate in the examinations in Arts and Science of the students of these constituent colleges. A London Teaching University in the Faculties of Arts and Science, with University and King's Colleges as its nucleus, was therefore apparently settled. The only serious point of difficulty remaining unsettled between the Colleges and the University was as to the position of the Preliminary Scientific M.B. Examination, for the Colleges wished it to be included in the Faculty of Science, and so be partially under their control so far as their own students were concerned, whilst the University was inclined to consider it from the standpoint of the Royal Colleges and the medical schools. Such was the position of the question with regard to Arts and Science during the vacation; but when the Senate returned to their labours they quickly found that they had omitted from their calculations the opposition of the University Colleges in the provinces and in Wales to the proposed scheme. They pointed out that undue influence would be given to the London colleges, that their students would be placed at a grave disadvantage, and they objected as strongly as possible to their omission from the list of constituent colleges. They said that the University was an imperial and not a local corporation, and that their objections were vital, and could not be met by trivial modifications of detail. A letter of urgent inquiry was directed to the Senate by the Lord President of the Council on Nov. 25th, 1890, as to their intentions with respect to an application for a new charter, and we now learn that the Senate are formulating another new scheme which will admit certain provincial colleges as constituent colleges, include their teachers in the Faculties and the Boards of Studies, and give them a representation on the Senate. But the adhesion of the London Colleges is dependent on there being no material changes made in the original scheme to which they have assented, and so the whole arrangement is again transferred to the melting-pot. The action of the Lord President must, however, have a critical effect, and we entertain great doubts whether the complexity of the problem will not be too great to be solved by the authorities of the University. Convocation has not yet been asked its opinion upon the reconstitution, and for a new charter its sanction must be gained.

Medical Degrees for London Students.

The question of degrees for London medical students has not advanced a single step. In May a committee of the Senate held a conference with delegates from the Royal Colleges of

Physicians and Surgeons, and as a result the following paragraph was inserted into the University scheme:—"The examinations in Anatomy, Physiology, Medicine, Surgery, and Midwifery for the pass M.B. degree shall be conducted by a Board of Examiners, consisting of the examiners appointed by the University and examiners to be appointed by the Royal Colleges, who shall join in the reports to the Senate on such examinations." The Presidents of the two Royal Colleges were to have seats on the Senate and to be included in the Standing Committee on Medicine. But the Royal Colleges are not agreed as to their joint action in this University question; for, whilst the College of Physicians has decided to accept a position on "a Standing Committee *of* the Senate for the Faculty of Medicine," the College of Surgeons merely wishes to form a part of "a Standing Committee *outside* the Senate of the University, to be appointed conjointly by the University and the two Royal Colleges." The recommendations of the Committee of Delegates appointed by the two Royal Colleges, which were passed by an almost unanimous vote, have thus been set aside by the Council of the Royal College of Surgeons, and it is important that the profession should fully understand that it is this body which is responsible for the breakdown of the medical negotiations with the University. It does not seem to have occurred to the Council that a University could only grant degrees on examinations conducted under the control of an inside authority, that London medical students had a right to degrees on equitable terms, and that no licensing corporation could equitably object to the satisfying of such a just demand. Negotiations have again been resumed between the University and the Royal Colleges, but as the position of the Teaching Colleges will be materially altered in the new scheme we have little hope of any favourable or working compromise being arrived at. The Lord President of the Council, instead of trying to weave in the numerous issues of the problem submitted to him, had better solve the difficulty by referring it back to the Royal Commissioners, or better still, to a Committee of the Privy Council. It is all-important that the drawing up of unworkable and unacceptable schemes should speedily be brought to an end, and we cannot see how the existing University of London can adjust provincial and metropolitan claims and give an equitable London degree without lowering the prestige of the "honours" degrees now conferred according to the Royal Commissioners on its pass graduates.

Medical Education.

This year will be especially marked for its influence on medical education, a resolution of the General Medical Council having been passed which will have a greater and farther-reaching influence on medical education than any act of that body since its establishment. At the meeting in June it was decided that after the 1st of January, 1892, a period of five years should be devoted by the student to his educational studies, instead of four years, as at present, and this extra year is to be spent in clinical work. "The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the medical authorities mentioned in Schedule A of the Medical Act, 1858, provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities." This resolution will not affect University students, for they are allowed to reckon the year which they spend in learning Physics, Chemistry, and Biology, as is now the practice for all University degrees, and four subsequent years are always necessary before they can obtain degrees in Medicine and Surgery. But all candidates for the diplomas of the licensing corporations will have an extra year added to their period of study, and will not be allowed to pass their Final Examination in Medicine, Surgery, and Midwifery until after the completion of this fifth year, although attendance on systematic lectures may be finished by the end of the fourth year. As yet no new regulations have been framed by the various licensing bodies for the carrying out of this new departure, but there can be no doubt that it will have a material influence on the future medical education of this country. A limited pupilage of six months to a general practitioner is permissible, and we shall anxiously wait to see if this permission be freely accepted by future students. There is ground for doubt, however, on this point, for opinions are somewhat divided as to the benefits which this pupilage may give. Extra clinical work in special diseases, such as those of the eye, ear, throat, and skin, in fevers and in mental diseases, and perhaps in practical pathology, will probably be the course pursued by the majority of students during this extra year, rather than utilising it, as many will expect them to do, in the work of actual private practice. It is important to point out that the General Medical Council has definitely decided that no system of compensation, as between the subjects of the Final examination—viz., Medicine, Surgery, and Midwifery—can be allowed at the Final examination. The following is the list of subjects of professional study and examination now laid down by the General Medical Council, but no opinion of the order in which they should be studied or examined on is given:—(1) Physics; (2) Chemistry; (3) Elementary Biology; (4) Anatomy; (5) Physiology; (6) Materia Medica and Pharmacy; (7) Pathology; (8) Therapeutics; (9) Medicine, including Medical Anatomy and Clinical Medicine; (10) Midwifery, including Diseases peculiar to Women and to New-born Children; (11) Surgery, including Surgical Anatomy and Clinical Surgery; (12) Theory and Practice of Vaccination; (13) Forensic Medicine; (14) Hygiene; (15) Mental Diseases.

The Medical Societies.

If we may judge by the number and diversity of the papers brought before the various societies during the past year, and by the fulness and vigour of the discussions which followed, we may aver that this method of bringing the results of individual investigation before the profession maintains and increases its popularity. We shall proceed to notice briefly some of the interesting points in the various communications we have placed before our readers during the year, though we much regret that limited space will not permit us to refer to many more which are in every way worthy of emphasis. Commencing with the oldest, the Medical Society of London, a careful analytical

paper on Croupous Pneumonia was produced by Dr. CHURTON of Leeds, in which he advocated the eliciting of more accurate information as to the exact causes of death in pneumonia, and suggested the probability of a curative drug being discovered. A full and scientific discussion of the epidemic of influenza was introduced by Dr. GILBART SMITH, who held that the disease was of an acute infectious type arising from some unknown cause apart from recognised telluric or atmospheric conditions, its dissemination being furthered by elements of a contagious nature. Dr. SAMUEL WEST gave a careful description of cases of "paroxysmal hurry" of the heart, and was inclined to believe that the cause was most likely some lesion of the myocardium. Mr. WILLIAM ADAMS, in an able paper on Dupuytren's Finger Contraction, adhered to the method of treatment by multiple subcutaneous divisions of the resisting tissue. Mr. BALLANCE communicated a paper on four cases in which he had removed Pyæmic Thrombi from the Lateral Sinus, the internal jugular vein being ligatured in the neck to prevent pyæmic infection of the lungs. Dr. HUNTER, in a paper on Pernicious Anæmia, adhered to his former conclusions as to the essentially hæmolytic nature of the blood changes in this disease. A debate on Abdominal Surgery, initiated by Mr. MEREDITH, brought out the present opinions of a large number of those who have paid special attention to the subject, and it was pleasant to note that the acute differences between the staunch adherents to the antiseptic system and those who opposed it had apparently much softened down. Sir WILLIAM STOKES discussed the subject of Pylorectomy, basing his remarks on a case which had come under his care during the previous year. He held that hitherto failure had been due to the late period at which the operation had been undertaken, and it was also dependent on the complicated mode of suturing. He advocated the use of decalcified bone plates in future cases. Professor WILLIAM ROSE, in a most able paper on the Successful Treatment of Persistent Neuralgia, demonstrated that it was possible to excise the Gasserian ganglion. This he did by first removing the upper jaw; but he spoke of this as unnecessary as a preliminary step. The operative efforts he had made to relieve this very intractable affection were very favourably received. The late Mr. MCGILL of Leeds described an operation for Closing Vesico-vaginal Fistula through a Supra-pubic Opening in the Bladder, which method, he argued, was easier than the ordinary procedure. Sir WILLIAM ROBERTS proposed, in a suggestive paper on the Deposition of the Crystalline Urates on the Tissues, to give to this process the name of "uratosis." Messrs. BERNARD PITTS and WILLIAM BROOK communicated a paper on the Treatment of Stenosis of the Larynx and Trachea following Tracheotomy, and reviewed especially the present position of intubation, pointing out the advantages and the contraindications of that procedure. Sir ANDREW CLARK, at the last meeting, contributed a paper in his characteristic style on the Convulsive Cough of Puberty, which provoked a lively discussion. He claimed that this was a clinical entity, a proposition which some of the physicians present were not prepared to admit —At the Royal Medical and Chirurgical Society, Mr. THOMAS F. CHAVASSE described a case in which he had removed the entire upper extremity for Osteosarcoma by BERGER'S method, and other instances where this had been carried out were related. Dr. JAMES CAGNEY gave the result of a series of experiments on the cadaver with a view to explaining the mechanism of suspension in locomotor ataxy. Mr. W. H. BENNETT described the rare condition of a Cæcal Hernia entirely wanting in a peritoneal sac. Dr. CHARLTON BASTIAN, in a communication on the Symptomatology of Total Transverse Lesions of the Spinal Cord, stated that he believed the abolition of the reflexes in these cases was due to the simultaneous cutting off from the lumbar region of the cord of the influence not only of the cerebrum, but also of the cerebellum. Some surgical illustrations of the truth of this proposition were later communicated to the Society by Mr. BOWLBY. Sir HENRY THOMPSON gave an analysis of 964 cases of operation for Calculus in the Bladder by lithotomy and lithotrity. He insisted especially on the fact that in the elderly adult male the re-formation of an acid calculus could almost invariably be prevented by strict dietetic precautions. Sir WM. ROBERTS put forward his views on the history of Uric Acid in the Urine, with reference to the formation of uric acid concretions and deposits. He explained the alternating reactions by which the uric acid was set free, and referred to the ingredients in the urine which inhibited or retarded the precipitation of uric acid in the normal state. Mr. BARKER discussed the results of a study of fifty cases of operation for the Radical Cure of Non-strangulated Hernia. Dr. HAIG, in a paper on Salicine compared with Salicylate of Sodium and its Value in Acute Rheumatism, came to a conclusion to the disadvantage of the former drug. Professor HUMPHRY, dealing with the subject of Senile Hypertrophy and Senile Atrophy of the Skull, the hypertrophy apparently taking place from within and the atrophy from without, threw out suggestions for their probable causation. Messrs. C. T. DENT and W. C. BULL, in an analysis of 400 cases of Amputation performed at St. George's Hospital from 1874 to 1888, found that the more favourable results as compared with former series were due to the absence of pyæmia, and resulted from the general adoption of the antiseptic system. Mr. JOHN H. MORGAN read a paper on 114 consecutive cases of operation for Calculus in the Bladder performed at the Hospital for Sick Children, and compared the methods adopted. The result of their study led him to the conclusions that small stones should be crushed in boys and girls, that oxalate of lime or large stones should be removed by lateral lithotomy in the case of boys, and that the supra-pubic operation should be reserved for stones of very large size or inconvenient shape in boys or girls, or cases of calculus embedded in a saccule of the bladder or impacted in the mouth of a ureter. Dr. HEWITT'S paper on Observations upon Respiration during Anæsthesia was an apt communication from the clinical point of view bearing on the results of the Hyderabad Chloroform Commission.—At the Pathological Society one of the earliest papers was by Dr. HUNTER on the Pathology of Duodenitis after Burns, in which he compared the action of the products thrown into the blood after burns with that of toluylendiamin, both giving rise to the excretion of substances irritant in their action through the bile. Mr. JAMES BERRY read a paper on Diseases of the Thyroid Gland; the pressure effects of thyroid tumours on the trachea and their

pathological varieties were especially described. A careful paper was presented by Dr. DELÉPINE on Sable Intestinal and other Intestinal Concretions, in which their minute structure was ably described. Mr. EVE exhibited some specimens of Ancient Egyptian Bones with Osteo-arthritis and Periostitis, and some skulls showing senile atrophy, from the College of Surgeons' museum. They probably dated from 1300 B.C. Dr. WALTER SIBLEY, in a communication on Tuberculosis in Birds, expressed his belief that this disease only occurred amongst them when in confinement, and dwelt on the fact that the direct experiment of feeding them on tubercle bacilli had so far given negative results. Brigade-Surgeon MYERS, describing a case of Perforating Ulcer of the Duodenum, suggested that it was due to accidental abrasion, followed by deleterious action of the gastric juice on the subjacent structures. Dr. WHEATON related an instance of Pulmonary Tuberculosis in which *aspergillus niger* was found growing in the bronchi. The interest of the case lay in the fact that the fungus bore a close resemblance to actinomycosis, both to the naked eye and microscopically. Dr. SAMUEL WEST placed on record a case of Sarcoma of the Liver, which was peculiar in that it grew up the caval vein into the heart. A communication by Dr. W. RUSSELL, on "Fuchsine Bodies," which he regards as the characteristic organism of cancer, will no doubt challenge criticism during the coming year.—At the Clinical Society Mr. GODLEE read, for Mr. TWYNAM of Sydney, a case of Calculus Impacted in the Ureter, which was removed through an incision similar to that used for tying the common iliac artery. Dr. DICKINSON brought forward a case of Diabetic Coma in which temporary relief followed the intravenous injection of very large quantities of saline fluid. Mr. CROFT related a case of Ruptured Small Intestine without External Wound, in which he had successfully performed laparotomy, excision of the injured bowel, and enterorrhaphy. Mr. HAWKINS-AMBLER and Mr. KNAGGS communicated a case of Acute Diffuse Suppurative Peritonitis successfully treated by laparotomy and drainage, but without irrigation. Mr. W. H. BATTLE read notes of a case of Tubercular Ulceration of the Bladder treated successfully by supra-pubic cystotomy and scraping with a sharp spoon after other methods of injection &c. had failed. A curious instance of an apparently Malignant Thyroid Tumour was put on record by Mr. G. R. TURNER. It underwent almost complete retrogression, and then subsequently grew again, and presented sarcomatous characters. Mr. R. W. PARKER, in reporting a case of Sudden and Fatal Dyspnœa due to a Bronchial Gland which had ulcerated into the trachea of a child aged twelve months, made some valuable remarks on the ethics of performing tracheotomy without the parents' consent. Dr. FINLAY, in a thoughtful paper on a case of recovery from Tubercular Peritonitis and Double Pleurisy, stated his belief that recovery from this variety of peritonitis was much more frequent than had commonly been thought. Dr. STEPHEN MACKENZIE showed a patient with Negro Lethargy, or Sleeping Sickness, and demonstrated the chief features of this rare affection. Dr. GOODHART narrated cases of Hydronephrosis cured by Natural Effort in order to emphasise the fact that they did not always need surgical measures; indeed, he deprecated interference with them unless pain or disturbance of the general health necessitated it. Among other papers of great interest is one by Dr. ERNEST HERMAN, who, as the result of a study of the use of the binder during the lying-in period, found that its sole utility was as a means of comfort to the patient. The premature termination of pregnancy in cases of phthisis was advocated by Dr. WILLIAM DUNCAN, provided it were done with full antiseptic precautions and after consultation with a colleague. Dr. LEWERS contributed a paper on Plugging the Uterus in severe cases of Post-partum Hæmorrhage, regarding it as especially applicable in those desperate cases for which the intra-uterine injection of perchloride of iron has hitherto been recommended. Mr. TREACHER COLLINS gave an accurate account of the Dissection of Ten Eyeballs in which glaucoma had supervened after the extraction of cataract. Mr. LAWFORD described a form of Optic Nerve Atrophy which he had found in smokers, basing his observations upon nine cases, and pointing out the distinctions between them and those of ordinary tobacco amblyopia. Mr. JACOBSON gave a concise classification of the various surgical sequelæ and complications of the Acute Specific Fevers. Dr. SAVAGE, in a paper on General Paralysis of the Insane, stated that he believed it to be a disease of higher civilisation, and syphilis played a very important part in its production. Dr. SIDNEY PHILLIPS, treating of the subject of the dangers connected with the circulatory organs in diphtheria, pointed out that many of these conditions were as serious and as frequent causes of death as the affection of the respiratory apparatus. He gave an analysis of 100 cases which had been under his own observation. Dr. PYE-SMITH, in a communication on Some Points in the Prognosis and Treatment of Cardiac Disease, made some valuable remarks on the selection of drugs for particular cases. Dr. J. W. MOORE called attention to a Cause of Angina Pectoris—namely, the cardiac paralysis due to the acute infective diseases, especially to diphtheria. Mr. CROLY read a paper on three cases of Compound Luxation of the Ankle-joint which he had treated antiseptically, and obtained a good result in all. Dr. EDWARD WILLOUGHBY, in a carefully compiled and critical paper dealing with the Public Health Law of Italy, showed it to be a masterpiece of scientific legislation. Mr. J. B. CURGENVEN brought forward the subject of the Treatment of Scarlatina with Oil of Eucalyptus, and maintained that the administration of it arrested the eruption, caused the temperature to fall, prevented albuminuria, and produced the immediate arrest and cure of the disease. Dr. JACQUES BERTILLON, Chief of the Municipal Statistical Department of Paris, read a paper on the Influenza Epidemic in France, and showed that the certified mortality from influenza could not be regarded as a real indication of its fatal results. A vastly greater number of cases died either from late secondary lesions or from causing or accelerating a fatal termination of other diseases. A paper on Dengue Fever was read by Dr. SKOTTOWE, who referred to the points of resemblance and of difference between this disease and influenza, relapsing fever, and rheumatism. During the year the Royal Medical and Chirurgical Society has become established in its new quarters, the library has

been completely rearranged, and the acoustic properties of the new meeting-hall very much improved. At the Medical Society of London a very handsome piece of furniture has been added in the form of a presidential rostrum and bookcase, and the rooms have been fitted with the electric light. The "clinical meetings" at the various societies have been most successful, and the very full attendance shows how much they are appreciated by the members.

The Tenth International Medical Congress.

This year has witnessed the greatest of the triennial International Medical Congresses which have now been established for a generation. It met in Berlin in the month of August under the genial presidency of Professor R. VIRCHOW, one of the foremost living representatives of scientific medicine, whose reputation and interests singularly fitted him to occupy such a position. That the gathering was a success, socially and scientifically, is admitted on all hands. Nothing could surpass the unlimited hospitality showered upon their guests by the German people of all ranks, and especially by the Berlin municipality and the medical profession, whilst the large numbers of associates strained to the utmost the organising capacity of a community by no means unskilled in the management of great assemblies. The addresses delivered at the general meetings reflected the cosmopolitan character of the Congress. Professor VIRCHOW struck the true key-note in his opening speech of welcome by claiming for science the true link that binds nations, however severed from one another politically. Dr. ROBERT KOCH, in his address on Bacteriology, stimulated legitimate curiosity by his declaration that he had at length discovered a means of preventing tuberculosis in the living body,—a discovery which has since been more widely made known. Sir JOSEPH LISTER claimed for the phagocyte theory that it rendered more stable the basis on which antiseptic surgery is founded. Dr. WOOD of Philadelphia expounded the relative merits and demerits of chloroform and ether in his address on Anæsthesia, and emphasised the greater risks entailed by the use of the first-named. Professor BOUCHARD of Paris and Dr. AXEL KEY of Stockholm were also selected to address the general meetings, the former on Infection and Immunity, the latter on the Development of Puberty and its relation to Morbid Phenomena among the Young. The sectional meetings, in spite of certain drawbacks due to the selection of the places in which they were held, were well attended, and in most of them discussions of much interest and importance took place. In that of Anatomy, Sir W. TURNER opened a discussion upon the Convolutions of the Brain; and one also took place on Histogenesis of Nerve-elements, by Professor HIS, in which Professors SCHÄFER of London and KÖLLIKER took part. The subject of Anatomical Nomenclature also received attention. Many communications and demonstrations were made in the section of Physiology, including papers on Muscular Contraction and Thermogenesis, by Dr. CHAUVEAU of Paris; on Fever and Urea Production, by Drs. WOOD and MARSHALL of Philadelphia; on Cortical Faradisation, by Professor SCHÄFER and Dr. MOTT; on the Motor Nerve-supply of the Larynx, by Professor V. HORSLEY and Dr. SEMON. In the section of Medicine, a discussion on the treatment of Bright's Disease was sustained by such eminent authorities as Professor LÉPINE, Professor GRAINGER STEWART, Professor ROSENSTEIN, Professor SENATOR, and Dr. AUFRECHT; one on the Treatment of Tuberculosis, by Dr. H. WEBER, Professor LEYDEN, and Dr. DETTWEILER; on the Treatment of Diabetes, by Drs. PAVY, DUJARDIN-BEAUMETZ, SEEGEN, and LÉPINE; and one on Myxœdema, introduced by Dr. W. M. ORD. In Surgery, the Treatment of Tubercular Peritonitis (opened by Dr. KOENIG), of Intussusception (by Mr. J. HUTCHINSON), a paper by Professor BILLROTH on Resection of Stomach and Intestine, and a demonstration of Aseptic Surgery by Professor VON BERGMANN were the leading features. The subjects of leucocytes and tissue-formation, of myocardial lesions, and of tuberculosis were the topics selected for general debate in the Pathological Section. In the section of Midwifery and Gynæcology the Electrolytic Treatment of Uterine Myoma, the use of Antiseptics in Midwifery, Vaginal Extirpation of the Uterus, and the Induction of Premature Labour formed but a small part of a very full programme. Space forbids even a reference to the work of the numerous other sections representing various branches of medicine and surgery. The experience of the meeting has suggested whether in future some plan may not be devised to facilitate the work of the sections by the previous circulation of abstracts of the papers to be read before the Congress. In point of magnitude it is hardly probable that the Congress of Berlin will for a long time to come be surpassed. The next meeting is to be at Rome in 1893, the President elect being Professor BACCELLI.

The British Medical Association.

The British Medical Association held its annual meeting a week sooner than usual, so as to enable its members to attend the International Congress at Berlin. The Association met in Birmingham on Tuesday, July 29th. Dr. WILLOUGHBY WADE was appointed President, in succession to Mr. WHEELHOUSE of Leeds. The address of Dr. WADE treated principally of the preliminary education of the medical student, urging the importance of securing education rather than mere instruction, and especially the necessity of securing time for a more sound education in sciences fundamental to medicine. He succeeded in drawing forth the praise of Professor HUXLEY for dealing a blow at the "Latin" fetish in medical education. Other features of the meeting were Sir WALTER FOSTER'S address on the Public Aspects of Medicine, Mr. LAWSON TAIT'S on Surgery, Dr. BROADBENT ON Therapeutics, Sir DYCE DUCKWORTH'S on Functional Diseases of the Heart, Mr. TIMOTHY HOLMES'S on the Surgery of Large Arterial Trunks, and Dr. W. S. PLAYFAIR'S on Modern Methods of Managing Lingering Labour. The finances of the meeting were reported to be in a satisfactory state. Dr. BRIDGWATER retired from the chairmanship of the Council, Dr. WITHERS MOORE taking his place. Dr. HOLMAN retired from the treasurership, and was succeeded by Mr. H. T. BUTLIN. Hearty thanks were accorded to Dr HOLMAN on the motion of Sir WALTER FOSTER, who eulogised highly his administration of the finances during his three years of office.

Hospital Mirror.

We have been guided during the past year in the selection of cases for the Mirror of Hospital Practice by the same rules that have always obtained with us in this department of THE LANCET. The contributions which have reached us have come principally from hospitals in the United Kingdom and Ireland, but many have been forwarded from the Colonies and some from the United States. They have illustrated the treatment of many and various conditions, some of them by the employment of drugs, others by the adoption of surgical procedures, both in the various general and special departments of medicine. Rare pathological changes, unexpected complications of injury or disease, and unusual symptoms have been described; whilst we have not always excluded reports of cases where the contributor, having possibly erred in his treatment, has sent notes of the case for the information of others. Our readers will recognise the fact that we do not always approve of the course adopted because the description is afforded space in our columns. We have continued the custom of making editorial comments on the reports as they have appeared from week to week, and that this is a feature of the department which is appreciated has been clearly indicated to us in many ways. Occasionally these comments have of necessity been limited, the cases having been fully commented on in the remarks appended to them; but when we have thought that a statement as to the more recent knowledge on any subject would be of interest, we have endeavoured to place it as concisely as possible before our readers. We propose to pass in review some of the most important of the cases that have appeared, and regret that want of space will compel us to limit the number very considerably. This year, again, we have published notes of an operation by PORRO'S method in the case of a rachitic dwarf aged twenty-five, both the mother and child surviving. This was the third pregnancy. At full time in the first craniotomy was performed at seven months, in the second labour was induced. The patient, who was only 3ft. 9¾ in. in height, presented great deformity of the lower extremities, and the pelvic measurements were much changed from the normal; the diagonal conjugate was 3½ in., the actual conjugate 2¾ in. The original intention of the operator was to perform Cæsarean section, but after the insertion of the sutures the uterus relaxed, and hæmorrhage ensued to such an extent that it was necessary to remove the uterus, which was done in the usual manner. A good example of the reduction of old-standing inversion of the uterus by means of the elastic repositor is given; the woman, aged forty-five, had been previously regarded as suffering from cancer of the uterus. The inversion was due to a large polypus; there had been superficial necrosis of both uterus and tumour, and later a sudden extrusion of the entire mass from the vulva. The polypus was only removed in part at first; it was sessile, and there was no very marked boundary between it and the uterus. There are few examples of the successful reposition of chronic inversion of the uterus on record, and fewer of its reduction by means of sustained pressure. The contributions to abdominal surgery have been numerous and very interesting. In two cases rupture of the coverings of a hernia is described; in one the woman, aged fifty-six, the subject of femoral hernia of long standing, had undergone operation for strangulation three years before; the coverings gave way at the cicatrix during a fit of coughing, and she walked some distance for treatment afterwards. Recovery followed careful cleansing of the protruded parts and suturing of the rent. In the other case the thin coverings of an old umbilical hernia gave way when the woman was straining, and a protrusion of small intestine took place. The escape of the intestine was attended with much shock, and it became nipped by the opening through which it had passed; it was returned after cleansing, and the wound sutured ten hours after the accident; but the patient (who was very stout) did not recover from the shock, and died next day. A most unusual cause for acute obstruction of the small intestine was seen in a patient seventy-six years of age. Severe symptoms had persisted for six days without any improvement, and abdominal section performed on admission to hospital revealed recent perforation of the part of the intestine affected, the vessels leading to which had been completely blocked by embolism. An addition to the series of seven successful operations by abdominal section for the relief of intussusception in the adult, previously recorded, was given in the case of a woman aged twenty-six. Symptoms commenced suddenly two days before operation and ceased after it. The intussusception was easily reduced by the operator when fully exposed. This form of obstruction is one which causes considerable anxiety to the medical attendant, and the question as to the advisability of abdominal section in any case should always be kept in mind. Of operations introduced during recent years, that of excision of the pylorus for cancer has proved one of the least satisfactory in its results. The shock of the operation is usually severe, and the majority have died after the operation from that cause. As the fatality was to a large extent due to the long time required to suture the parts after removal of the growth, any modification of that process which should prove effective, and shorten the time required, could but be welcomed by the profession. And the use of the interrupted suture and SENN'S bone plates would appear to have brought us nearer success than any other method, if we may judge by the result in a patient aged fifty-six, for whom this operation was performed. An account of the removal of part of the bladder wall with peritoneum over it for epithelioma, being the second operation of the kind performed in this country, shows the possibility of attacking some of these growths at an early stage with at least temporary success. The patient, a woman aged fifty-five, extremely stout, died from hæmatemesis on the third day after the operation. The cause of death appeared to have nothing to do with the removal of the disease, for everything was quite satisfactory in the region of operation. We have space only to permit of the brief mention of one other curious case in genito-urinary surgery, that of a man aged forty-three, who received an injury to the abdomen, not of great severity, continued work for four days, and was then seized with severe pain in the back, suppression of urine, vomiting, and rigors. He died thirteen days later, and at the necropsy it was found that the ureter leading from the left kidney had become blocked with an inspissated thrombus. There was no kidney on the other side. Two examples of hernia

cerebri in boys aged six and eight, both of whom recovered, are reported. In the former it developed after removal of bone in a compound depressed fracture of the skull, with laceration of the brain; in the latter, after operation for traumatic abscess of the brain. In both the hernia was in the frontal region, and in the second the treatment extended over more than a year. The recovery of a patient who had attempted suicide by driving nails into his head with a hammer is remarkable. These, which were three-inch French nails, were placed mainly in the mid-line of the scalp, and three out of the four driven home, but no ill-effect followed their extraction beyond slight suppuration in the scalp near one puncture. Amongst the cases illustrative of thoracic surgery is one of double empyema in a boy aged six. A portion of rib was removed from the right side about a fortnight after the commencement of the illness, and twelve days later a similar operation was performed on the left side. Recovery rapidly followed the operations. The good result of the bath treatment in hyperpyrexia developing during the course of rheumatic fever complicated with pneumonia, has seldom been better shown than in the case of a man aged forty-two. Salicylate of soda, digitalis, and stimulants were given internally, but the baths appeared to produce more than a temporary effect on the temperature curve, which was above 107° on several occasions. The relationship between chorea and rheumatism was exemplified in the case of a child aged eleven. The choreic symptoms, which were accompanied by aphasia, were of severe character and two months' duration, but it was not until she had been a month under treatment in bed that rheumatism developed. This case would appear to be confirmatory of the theory of KOCH—that the choreic virus is so closely related to that of articular rheumatism that either disease can be caused by it. Other very interesting cases we can only mention are:—Cholecystotomy for gall-stones; extensive operation for hernia and removal of omentum in a woman aged eighty; chronic obstruction of the intestines by safety-pins; three cases illustrating the good effect of abdominal section for tubercular peritonitis; supra-vaginal hysterectomy; compression of the femoral artery for a period of 184 hours, resulting in the cure of a popliteal aneurysm; ligature of the external iliac artery for femoral aneurysm—in one patient the aneurysm was circumscribed, and in the other diffused; simultaneous fracture of both clavicles; fracture of the anatomical neck of the humerus and dislocation of the head.

Special Sanitary Commission and other Reports.

Our special inquiry as to Bakeries and Bread-making, commenced at the close of the year 1889, was continued during the first months of the present year. In January we published a special report describing the Municipal Bakery in Paris, where the bread consumed in all the hospitals and asylums is manufactured. We were then able to show that the journeymen bakers in municipal employ worked shorter hours in more wholesome quarters, had constant employment, and a pension for old age, and yet turned out more wholesome and cheaper bread than could have been obtained from private contractors. The nutritive and digestible qualities of the bread are uniform throughout the Paris hospitals, and superior to most of the bread sold by the trade, for it all comes from the Municipal Bakery of the Rue Scipion, near the Avenue de Gobelins. Here 14,000 loaves are baked every day. The system of municipal bakeries prevails also at Brussels, where the bread supplied to the hospitals is baked at the Hôpital St. Jean; but this institution is on a smaller scale, and not so well managed as the municipal bakery of Paris. From Paris and Brussels our Commissioner went to Glasgow, where he studied the bread and pastry for which Scotland is renowned. The result of these inquiries was certainly not gratifying. The bread in Glasgow was in many cases made in close proximity to open drains, and this in dark and ill-ventilated cellars. Here the Scotch bakers danced with naked feet in the dough, a process which, they maintained, gave a better flavour to the bread than could be obtained from hand work or from the most improved of modern machinery. Even the large modern bakeries, where steam power and machinery are extensively employed, were far from satisfactory from a sanitary point of view. Closets, often very dirty, were discovered ventilating even into model bakehouses, where moist dough lay exposed. At Manchester, our Commissioner found a very similar state of things; and evidently further legislation is necessary for the sake of the journeyman baker, who is forced to work under very insanitary conditions, and for the consumer, who must eat bread coming from filthy places. In the meanwhile, much good might be achieved by a more strict application of the existing laws affecting this trade.—The determination of the London County Council to energetically take in hand the great question of the Housing of the Poor led us to institute a special inquiry as to the results attained by the very active intervention of the Glasgow Municipality. Glasgow has achieved what London now desires to attempt. Glasgow has municipalised some of its common lodging-houses. The Town Council possesses seven model lodging-houses, accommodating 2000 persons, and these are about the best and most suitable structures existing for such a purpose. The methods of warming and ventilation, with drawings to illustrate the same, were given in our special reports on the subject. These municipal common lodging-houses, after paying all expenses, yield a net profit of 5 per cent.; 3½ per cent. is employed to pay the interest on the capital borrowed for their construction, and the remainder is set aside either for amortisation or for the reduction of rates. Not only are these houses in themselves an immense improvement, but this municipal competition has raised the standard of comfort, cleanliness, &c., in lodging-houses owned by private persons. The result, as clearly proved by municipal statistics, is a most encouraging and marked decrease in the prevalence of both crime and disease. At Edinburgh a totally different spirit prevailed. Here the municipality had washed its hands of any such responsibility as the building of common lodging-houses, and left the matter to the initiative of private enterprise. The result was the formation of a private company with £10,000 capital, but with so little knowledge of the *technique* of the subject that the huge and æsthetically decorated common lodging-house they built was condemned by the sanitary authority, and a licence to take lodgers under the

Act refused, at least till such time as the alterations indicated had been effected.—During the year 1889 we had published reports on the British Emigration Services, pointing out what improvements still remained to be achieved to ensure the health of hundreds of thousands of emigrants who yearly sailed from British ports. This year our Commissioners have carried their investigations from the emigrants' quarters to the forecastle, and found among the sailors and the firemen far greater grievances than any that affect the emigrants. Our first report on Sanitation at Sea caused a great sensation, and was extensively quoted throughout the Press. Armed with the general support of the public, we hope to carry these investigations further, and to urge the matter forward till remedial legislation is obtained, or till such structural alterations are made as will prevent needless loss of life, especially among the firemen. Exposed to the terrific heat of the stoke-hole, and then to the contrast of the bleak winds on deck, a strong fireman's constitution is broken down after six or seven years' work. In this scientific age there must be some means of avoiding such disastrous destruction of men's health; and, considering how much England depends on her maritime supremacy for her very existence, these are questions that cannot fail to awaken the keenest interest of both humanitarians and patriots.—Convinced of the importance and the world-wide interest evoked by Dr. KOCH'S great discoveries in the treatment of tuberculosis, we despatched a Special Commissioner to Berlin, who, by observing and studying what was being done, was able to give the most impartial and the most prompt information of the progress made in this new departure in the treatment of the most fatal of human diseases.—In a series of special articles we described the reforms proposed, and in part realised, for the carrying out of the Contagious Diseases Acts in Paris and Brussels. The evidence collected in both these towns demonstrated most clearly that the State regulation of vice not only helped to preserve public health, but materially contributed to the improvement of public morality. As most of the women in question are driven to the streets, not through any innate viciousness on their part, but by poverty, by the total inability to earn their living in an honourable manner, the authorities both in Brussels and Paris are seeking to soften, to humanise the methods by which a salutary control is exercised over these victims of our imperfect civilisation. What is proposed to be done in this respect we have fully described; and when these reforms are realised abroad they will help to render such legislation more popular at home. We may then hope to revive the Acts, which, being abrogated in England, leave us without protection against a source of infection that now plays havoc with the rising generation.—We may mention also that, in the interest of authors and writers of the medical profession, by special articles and individual intervention, we took an active part in the International Literary and Artistic Congress recently held in London. The object was to assimilate the law of copyright, so that scientific and other works should not be pirated by foreign publishers, especially those of America. The new copyright law, voted by the American Legislature but a few weeks ago, seems to indicate that our efforts in support of this cause have already been rewarded with some measure of success.—Among the subjects which have been investigated during the year, the difficulties of Hospital Nurses have taken naturally a prominent place. This subject has been brought conspicuously under public notice by the proceedings before the Committee upon Metropolitan Hospitals appointed by the House of Lords; but the evidence given there has taken very much the character of an attack upon one particular institution. Our Commissioner's Report, on the contrary, has collected materials from various sources, and has pointed rather to fault of system than the questions of personal character and demeanour.—Another matter which we have investigated from the professional point of view is the provision of facilities for Life Assurance by professional men which existing arrangements afford. The result of the work which we so put in hand is as yet only partly seen, but already it has become evident that an appreciable enlargement of such opportunities, and a better adaptation of the provision made to the necessity existing than has heretofore been the case, will in the end result in improvement, of which we trust that the members of the medical profession will not be slow to avail themselves.

Benevolent Societies.

It would be unkind at a season like this to make no allusion to the benevolent institutions of the profession. Too few of our number achieve complete independence of the help of such institutions, or of individual and generous practitioners. The directors of the Society for Widows and Orphans still grieve that many medical men in the London postal district do not avail themselves of its easy rules for securing their families from serious want in the event of their own decease before making due provision for the future. The twenty-fifth festival in aid of the Royal Benevolent Medical College was memorably held at the Whitehall Rooms of the Hôtel Métropole, under the genial presidency of Sir JAMES PAGET, supported by Lord GRANVILLE, president of the College; Sir ANDREW CLARK, Sir THOMAS CRAWFORD, and other distinguished men. Such societies as these and the British Medical Benevolent Fund should be generally remembered at this festive season. We may mention also THE LANCET Relief Fund, the annual report of the almoners of which will appear in our next issue.

Honours to Medical Men.

The State honours bestowed upon medical men during the year that is past are neither numerous nor conspicuous. Sir WM. SAVORY was presented with a baronetcy. Sir OSCAR CLAYTON and Brigade-Surgeon EDWARD CORRIGAN MARKEY were promoted to the Companionship of the Order of the Bath. Sir JOHN KIRK, M.D. Edin., became K.C.B. RICHARD SARELL, M.D., received the Order of the Osmanieh; and Surgeon-Major WILLIAM REED MURPHY and Surgeon FREDERICK ARTHUR RODGERS received the Distinguished Service Order. Sir ALFRED BARING GARROD, M.D., was appointed one of Her Majesty's Physicians Extraordinary; while Deputy Surgeon JOHN WILLIAM WALKER, M.D., has been appointed Honorary Physician to the QUEEN. The Prince of WALES has appointed Sir OSCAR CLAYTON, C.B., as Extra Surgeon-in-Ordinary; Dr. A. REEVE MANBY to be Surgeon Apothecary; and Sir

DYCE DUCKWORTH to the post of Honorary Physician. It has been determined to adorn the façades of the New Policlinic at Rome with a large statue of Sir JOSEPH LISTER, in illustration of the modern Genius of Medicine. Surgeon PARKE, for his splendid services, heroism, and devotion to duty, received, among other honours, the Gold Medal of the British Medical Association, and was presented by the Editors of THE LANCET with a handsome silver salver weighing 200 ounces; besides being made a Fellow of the Royal College of Surgeons in Ireland, he had likewise conferred upon him the honorary degree of D.C.L. by the University of Durham. Surgeon JOHN CRIMMIN was awarded the Victoria Cross for bravery in the field.

Obituary.

It is never possible at this stage of our Summary to express the sentiments which rise in the mind from a review of the deaths in our ranks, and a consideration of the causes which have led to them. We cannot even give the names of those who have died. We can only recall a few of them from every branch of practice and every division of the kingdom. Some of the deceased were entitled to rest from their labours, having attained the threescore years and ten, and even fourscore years and more. Mr. CHARLES OSWIN had completed sixty-six years of professional life; Dr. AQUILLA SMITH, familiar in London as in Dublin, died at eighty-four. Some died on the very threshold of the profession which they promised to adorn and honour, like Mr. BERTRAM V. SORTAIN, B.A., M.B., B.C.Cantab., or CYRIL WILLIAM JECKS, M.D. Lond. Some died of disease almost as old and gentle as decay; others were attacked with diphtheria or typhoid, like Mr. HARRY CRIBB, whose death we recorded last week. The list of loss includes the names of Mr. HENRY JAMES WOLFENDEN JOHNSTONE, J.P.; JAMES MORTON, M.D. Glasgow; THOMAS WARBURTON BENFIELD; Sir WILLIAM WITHEY GULL; ALEXANDER SHAW; ARTHUR JULIUS POLLOCK; MARTIN DE BARTOLOMÉ; GEORGE CORNELIUS JONSON; DAVID HOADLEY GABB; Dr. DAVID PAGE; Inspector-General JOHN MACPHERSON; JAMES HARVEY ROLAND (shipwrecked in the *Quetta*); Dr. FINCHAM; JOHN SCOTT, Inspector-General of Hospitals; Dr. R. C. R. JORDAN of Birmingham; Dr. J. MATTHEWS DUNCAN; Dr. EDWARD WATERS; Dr. PETER HOOD; Dr. H. J. BIGELOW; and many others whose work constitutes the credit of the profession and of the medical departments of the public services.

AT a conference of the metropolitan medical officers of health, at the offices of the London School Board, it was agreed "that the following be diseases to be dealt with under any scheme to be adopted:—Scarlet fever, smallpox, diphtheria, membranous croup, enteric, typhus." "That a notification of the occurrence of any of the infectious diseases agreed upon in the foregoing resolution be at once forwarded by the medical officer of health to the head teacher of the school attended by the children of the infected household." It was also agreed to make a representation to the Asylums Board, that it was of great importance that the medical officer to the School Board for London should be made aware of the extent of infectious disease within the metropolis, and be furnished weekly with a copy of the return of infectious diseases within the metropolis.

Annotations.

"Ne quid nimis."

THE UNIVERSITY OF LONDON AND THE COLLEGE OF SURGEONS.

IN spite of the Arctic weather on Saturday afternoon last there was an influential muster of Fellows of the Royal College of Surgeons, under the presidency of Mr. Pollock, at the rooms of the Medical and Chirurgical Society, to discuss the secret negotiations between the University of London and the Royal Colleges. It is satisfactory to note that the action of the executive of the Fellows Association in issuing the protest and the memorial recorded in our columns on the 13th inst. was fully endorsed by the meeting after excellent speeches by Mr. Holmes and so able a representative of the Provincial Fellows as Mr. Mayo Robson of Leeds. It was agreed, on the motion of Dr. Collins and Mr. Treherne Norton, that this action should be followed up by a deputation, if need be, to the Lord President of the Council, the Senate of the University of London and the Royal Commission on the Teaching University for London. It was also wisely decided that with a view to consolidate the Association and extend its aims by friendly intercourse and interchange of views, a dinner should be held in April next, as the former Fellows' dinner has altogether lapsed and left the Fellows destitute of any bond of social union.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

THE trials of the anti-tuberculous fluid of Professor Koch continue to be carried on in most centres, and from time to time opinions are being expressed as to the results obtained. It must, however, be conceded that sufficient time has hardly yet elapsed for any very positive conclusions—especially in tubercular disease of internal organs—to be arrived at. We note with satisfaction that Dr. Koch has declared his intention of only supplying hospitals with the fluid—a decision which should have been arrived at from the first, in view of the extreme care requisite in the observation of the cases injected. But we must still maintain that it would be far more satisfactory if he would vouchsafe to impart to the profession some information which would indicate to a certain extent the nature of the remedy. As we have before said, the idea that any such statement would lead to the manufacture of spurious samples may be dismissed as chimerical; the profession can well be trusted to use only remedies which have the stamp of a genuine origin. We have not yet received authentic information of the assertion that M. Petit of Paris claims to have synthetically prepared a "lymph" identical in its characters and reaction with that of Professor Koch; and we allude to it with the greatest reserve. Nor do we credit another rumour to the effect that Professor Koch is in despair at the failure to manufacture the lymph wholesale; this on the face of it is incredible, and has probably arisen from the fact that the delicate processes of bacterial cultivation are liable to great modification on the slightest change in the conditions. What is probably true is that there is great difficulty in securing uniformity in the composition of the fluid. On the 16th and 17th inst. Professor Leyden lectured on his experience with the remedy up to the present time, 127 patients having been treated in his wards, mostly cases of marked tuberculosis, especially pulmonary and laryngeal phthisis. He discussed the symptoms of general and local reaction, dwelling particularly on the marked effect upon the pulse and circu-

lation, irrespective of the degree of pyrexia attained, and considered it proved that the remedy has a specific effect on tubercular foci. The remedy may, he thinks, increase the number of cures of phthisis, not by reliance upon it alone, but as a part of the treatment, which experience has hitherto shown to be most successful towards that end. He says that he gives his conclusions with all reserve, for it is impossible as yet to state the precise scope of the remedy. In Paris, M. Cornil, who has been lecturing every week on the subject, stated in his last lecture that the use of the remedy in pulmonary tuberculosis must de very restricted indeed.

THE IMPERIAL INSTITUTE OF EXPERIMENTAL MEDICINE AT ST. PETERSBURG.

AN elaborate and imposing ceremonial took place on the occasion of the inauguration of the Institute of Experimental Medicine at St. Petersburg on the 20th inst. This institute has been founded by the Prince of Oldenburg, and the inauguration was attended by himself, the Princess, the Grand Duke Michael, and other members of the Imperial family, several foreign ambassadors, and representatives of medicine and science; the delegates from France, England, and Germany being M. Chamberland, who attended on behalf of M. Pasteur; Mr. Watson Cheyne, for Sir J. Lister; and Dr. Pfuhl, for Prof. Koch. The proceedings commenced with a religious celebration, after which the Minister of the Interior read a rescript from the Czar to the Prince of Oldenburg, thanking him for his generous gift to the nation, and his benevolent services to suffering humanity, and appointing him governor of the institute. Speeches were made by the delegates, and the company were subsequently entertained at Oldenburg Palace by the Prince.

THE PRODUCTS OF PATHOGENIC BACTERIA.

DURING the past two years great progress has been made in the study of the action of pathogenic bacteria. This work has chiefly been carried on by Koch and Pasteur on the Continent, and by Drs. Sidney Martin and Hankin in England. In the *Revue de Médecine*, 1890, No. 7, Dr. Charles Bouchard publishes an article on the properties of the substances secreted by pathogenic micro-organisms. It contains the chief part of his address before the Tenth International Congress on the "Mechanism of Infection and Immunity." After an exhaustive summary of all that is known concerning the action of products of metathesis with which we are acquainted, Bouchard relates a series of thirty-one experiments which he made, partly in order to investigate the power which blood-serum possesses of destroying bacteria, and partly to ascertain how far their products confer an immunity against similar or other bacteria. Many experiments demonstrated the influence of the same products on phagocytosis. The space here is too limited to enter into the details of this interesting paper, but the general results of Bouchard's investigations are as follows. Among the substances secreted by the microbes are some which have an inhibitory action on them—that is to say, these products tend to retard the development, increase, and characteristic action of the micro-organisms; other substances are favourable to their growth. These, however, only act indirectly by modifying the material upon which they grow (peptones &c.) Such products may be favourable or unfavourable for other microbes. Some organisms produce poisonous substances upon which depends their virulency. Amongst pathogenic microbes are some which secrete substances that confer upon animals inoculated with them an immunity against these particular germs; this they do not by their presence only, but by modifying the animal organism, so that it forms a less favourable pabulum for the development and growth of the bacteria, and causes the leucocytes to perform the process of diapedesis more rapidly, and to assume their functions as phagocytes more energetically. If an animal be inoculated with these substances, together with a pure culture of the same bacilli from which they were obtained, the disease runs a more rapid course, whilst its development will be delayed or prevented if the animal be inoculated a few days before the injection is made. If bacteria which act antagonistically towards one another be cultivated together in a test-tube, the soluble products of the "stronger" can be made to retard the development of the "weaker" organism. So that if an animal be inoculated with the products of metathesis of the "stronger" at the same time as the active principle of the "weaker," the action of the latter will be delayed and weakened. Some microbes appear to assist the action of others; these Bouchard terms "auxiliary microbes." By this means an animal may be infected with a disease which it would otherwise resist.

IMPORTANCE OF EXAMINATION OF THE TEETH IN EPILEPSY.

DR. BAKOWSKI mentions in the *Przeglad Lekarski* an instructive case of epilepsy occurring in a young Jewess. It had been going on for nine months, and latterly the fits had become more frequent, there being several every day. Bromide of potassium, quinine, arsenic, and asafœtida had been given without any effect. Finally, although there was no complaint of toothache, it was decided to examine the mouth. Two teeth were found to be carious—the first upper molar on the right and the first lower molar on the left side. These were extracted, with the result that the fits entirely ceased and did not return, though the patient was under observation for six months subsequently. Upon being closely questioned the girl remembered that before the fits commenced she had had some unpleasant sensations in the affected teeth, but nothing that could be described as pain.

HORSE EXERCISE FOR SCHOOL GIRLS.

AMONG the many methods to give girls physical exercise during their school days, the one which is the most popular and enjoyable is riding on horseback. So usual has this become in all higher-grade day schools that "riding lessons" are included among the extra subjects to be taught as part of the regular education for those whose circumstances enable them to bear the somewhat heavy cost. We should be glad to see it even more widely introduced, for unquestionably no exercise can surpass that of riding, both as a physical training and an exhilarating recreation. Certain preliminary precautions ought not to be neglected: the horse should be easy in action, well trained, and such as is generally understood under the term of a "good hack"; free in movement, light in mouth, and altogether exempt from vice and irritability. Such qualities can only be attained by a course of long training. The animal provided, attention should next be directed to the side saddle, which should be of the most approved pattern, to enable the seat of the rider to be straight and firm, which are the first conditions to ensure lightness of hand, every precaution being considered both as regards saddle and dress to prevent "hanging" to saddle if thrown. One day's lesson should be in riding on the near side, the next on the off side, for the double object of giving greater ease and freedom of movement in the saddle and bringing opposite sets of muscles into action, thereby keeping the shoulders level. While we should deprecate "*the manly maiden*," as depicted in our excellent contemporary *Punch* (Dec. 6th, p. 265), we should encourage the physical development of her "whose voice is ever soft, gentle, and low, and

whose mild influence is shed like a balm upon the labours and troubles of life" (*Punch*). One of those who combines with such qualities exquisite skill and grace in horsemanship in addition to all else that should be most admired in woman has supplied us with the following notes on her training in horsemanship, than which there can be no better guide to girls aspiring to be like her. "I think, to ensure a straight, firm seat on horseback for a lady, it is advisable to learn from the beginning as a child to ride on both sides alternately. This is easily done by having a saddle made with two flaps and a movable third pommel, which can be shifted from side to side, and of course there must be two pommels fixed. My sister and I always rode on both sides when children, and could ride nearly as well on the off as the near side. It stands to reason it must be better for a growing girl not to be always in one position, and it also leads to a stiff, crooked seat, and a tendency to hang over the near or off side, as the case may be, which, however well a woman may ride, makes her look stiff and ungainly in the saddle. Perfect ease and a straight firm seat, so as to look as if horse and rider were one, can, I feel sure, only be got at by riding as a beginner on both sides. The reins are held in the left hand whichever side the rider may sit, and riding on the off side tends to bring up the left shoulder so as to make a perfectly square seat, which is *the* object to aim at in a woman's seat. I only wish I had gone on riding on the off side, as it would be of the greatest comfort to horses to shift the weight from one side to the other. Of course, later on it would be advisable to have two saddles, as the one with two flaps and a movable third pommel would be very heavy and ungainly to look at. I add three lines which were told to me when a very small child, and I have endeavoured to keep them always before me:—

"'Heads and hearts up,
Hands and heels down,
And the elbows close to the side.'"

CHOLERA INTELLIGENCE.

M. HENRI MONOD has definitely announced to the Comité Consultatif d'Hygiène, held at his offices in the Ministry of the Interior at Paris, that the two observation stations of Cerbère and Hendaye on the Spanish frontier have been closed, and that arrivals from Spain are no longer to be regarded as suspect. At the same meeting, which was held under Dr. Brouardel's presidency, Dr. Proust stated that, as regards Syria, there had been in the past week 176 cholera deaths in the villayet of Aleppo, as contrasted with 80 such deaths in the preceding week; the total cholera deaths in the villayet during the last three months having reached 1878. In the villayet of Adana there were 53 fatal cases during the same week, and of these 47 took place in the town of that name. In short, a recrudescence of intensity in the cholera diffusion seems to have taken place. The epidemic having reached Tripoli, 4 deaths are announced as having occurred there on the 8th and 9th instant. Taking all the information which has reached us from Syria, it would appear that in a population of some 600,000 there have been 6000 cholera deaths, or at the rate of 1 per cent. of the inhabitants during the past three months. The persistence of the disease at this season of the year bodes no good for the coming spring.

BULIMIA CONSEQUENT ON CONCUSSION.

A CURIOUS effect of concussion of the brain—i.e., the occurrence of bulimia or excessive hunger—is reported by Dr. Putawski in the *Gazeta Lekarski*. The patient was a well-developed and robust young man belonging to the peasant class, who struck his head against a stone in a fall from a waggon. When admitted into hospital he was insensible; there was bleeding from the meatus of the left ear, and his jaws were firmly clenched. No serious external injury was to be seen. For the first three days he was drowsy and delirious by turns. On the fourth day there was paralysis of the left facial nerve, with ptosis on that side; the tongue also was protruded to the right. Examination of the ear revealed, what had been suspected from the first, a fracture of the base of the skull, and more particularly of the petrous portion of the temporal. On the fifth day consciousness returned, and at the same time the man became inordinately hungry, the usual diet for convalescents, even when added to from various sources, not nearly satisfying him. He complained constantly of hunger, and even cried for food. Six pounds of bread daily, besides other articles of diet, were insufficient. By means of the œsophageal tube it was found that three ounces of bread and half a pint of tea had passed from the stomach in an hour. There was no special thirst, the bowels acted regularly, and the quantity of urine varied from one to two litres per diem. After the man had been ten weeks in hospital his appetite became normal again. He was then discharged, and it was remarked that his temperament had changed from a gay and lively disposition to a quiet and complaining one. He expressed great surprise at the quantities of food he had taken during the time he was in hospital.

INFLUENZA AND VACCINATION WITH CALF LYMPH.

DR. GOLDSCHMIDT, a German physician in Madeira, has recorded an interesting observation in connexion with the influenza epidemic in the island, which appears to show that persons recently vaccinated with animal lymph, at all events, are far less susceptible than others to the poison of influenza. In consequence of a small-pox epidemic at the end of 1889 a large number of persons were revaccinated with calf lymph. Of 210 cases, 112 were successful, and when the influenza came in January not one of these 112 was affected by it. Of the ninety-eight unsuccessful cases, fifteen were affected by the influenza, but none of them had severe attacks. The following instructive case is especially alluded to. In a large isolated villa containing thirty-eight persons, every one of the twenty-six who had not been revaccinated contracted influenza, two of them most severely; while the whole of the twelve who had been revaccinated remained free, though in three cases the vaccination had been unsuccessful. Dr. Goldschmidt suggests that perhaps the reason why children so frequently have slight attacks of influenza, if they are affected at all, is that they had been recently vaccinated.

A NOVELTY IN DRESS.

A DISTINCT advance in the hygiene of dress is illustrated by a costume lately introduced by Mrs. Charles Hancock. The new mode is distinguished by several excellences, and its principal features are—the substitution of a waistcoat for the bodice, with neat supplementary chest pieces, an over-jacket, a short skirt reaching to within five inches of the ground, knickerbockers in place of petticoats, and gaiters. Lightness and warmth have been studied in the choice of material. It will be seen that this latest novelty offers no striking contrast with methods already known and accepted by custom. It is, in short—the term itself is descriptive,—little else than an adaptation to the conditions of city life in winter of the dress now commonly worn by ladies when traversing the moors or hunting with beagles. The shortness of the skirt is its most striking characteristic, and one which deserves a word to itself. Alike as regards wear, cleanliness, dryness, and comfort, the dress thus curtailed will compare favourably with the more familiar flowing garment now in use. Its advantages

in such miry weather as the present require no recommendation. In view of the attention paid to underclothing there should be little, if any, risk of taking cold from the absence of petticoats, and the addition of these if desired is doubtless easily possible. The only objection to this wholesome variation in clothing is, we presume, an æsthetic one. To some persons, the convenience of reduced length in the skirt may seem too dearly bought at the cost of womanly dignity. This, of course, is a point for sentiment, not science, to determine. An alteration allowing a somewhat longer garment to be drawn upwards as required would probably content the most censorious critic. Its readiness of adjustment in this and other matters, indeed, is not the least of the facilities afforded by this convenient and healthy costume.

MIGRAINE AND HYSTERIA.

IN the last number of the *Archives de Neurologie* Babinski calls attention to a very important fact in regard to migraine—viz, that there is a large class of patients who suffer from what one would be at first inclined to say was the classical migraine, but that in this particular class there is a background of hysteria very important to diagnose because of the great difference which it makes in regard to both prognosis and treatment. Details are furnished of several cases of this kind—cases which, besides showing typical hysterical symptoms, such as hemianæsthesia, insensibility of pharynx, contraction of the visual fields, &c., also suffered from attacks of migraine with the usual visual phenomena, indeed in no way differing from those occurring in non-hysterical patients. The great difference is in their curability, and this is effected by means of a course of baths and the administration of bromide of potassium. Under the influence of this treatment the other hysterical phenomena, as well as the migraine, all disappear. Whether such a class of cases exist in this country remains for future observation to determine. It is well to bear the possibility in mind.

THE EFFECTS OF EXTIRPATION OF THE PANCREAS.

DR. BOCCARDI of Naples, remarking that, though a good many researches have been published by various observers of experiments in which the pancreas has been removed with the result of producing glycosuria, no detailed account of the pathological condition of the tissues and organs had appeared, determined to remedy this defect in our knowledge, and undertook a new research on the subject in the anatomical institute of the Naples University. A preliminary note has just been published by him in the *Riforma Medica*, in which he describes the anatomical appearances in animals after deprivation of the organ in question. All or nearly all were greatly emaciated, notwithstanding plenty of nutritious food after the operation. No boils or other cutaneous affections were found. There were no morbid changes in the salivary glands, nor in the œsophageal and buccal glands, nor were there any modifications in the conditions of renewal of the glandular elements. There was little or no change in the stomach. Brunner's glands were always normal, but Lieberkuhn's glands in many cases presented an increase in the karyokinetic changes of their epithelium; sometimes the epithelium was much enlarged and altered, goblet cells being only discoverable at rare intervals, and the whole had somewhat the appearance of Brunner's glands. There were practically no changes in the œsophagus or in the nervous elements in the coats of the digestive tract. The liver always presented morbid changes, even in a dog which had been operated on only four days before it was killed, and had only just begun to pass sugar in the urine. Most frequently there were fatty degeneration and simple atrophy; sometimes also there was a vacuolar condition of the cellular protoplasm, ending in complete destruction of the cells. The hepatic bloodvessels were frequently distended and filled with blood, and sometimes small hæmorrhagic spots were seen. The spleen, thyroid, and suprarenal capsules did not present any definite morbid changes. In the kidneys only slight and occasional changes were found. There was never any glycogenic infiltration of the epithelium; this condition also was entirely or almost entirely absent in the liver. Herein Dr. Boccardi believes the main distinction lies between natural and artificial diabetes. The cardiac plexus was normal. In six out of twelve cases examined there was atrophic degeneration of the pyramidal tracts of the spinal cord, most marked in the neighbourhood of the cervical enlargement. No neuritis or degeneration was found in the splanchnics or pneumogastrics, or in the anterior and posterior roots. In one case only was any morbid change detected in the sciatic nerve. No important change was found in the brain or medulla, or in the muscular system. It would thus seem that various lesions are produced in a short time after the extirpation of the pancreas. The state of the spinal cord would appear to be of special interest in the light of Charcot's recent researches.

THE ESSEX COUNTY HEALTH OFFICERSHIP.

THE difficulty as to the appointment of Dr. Thresh as county medical officer of health for Essex still remains. From an account of the last proceedings of the committee who have this matter in hand it still seems that they only want a skilled compilation of vital statistics. The pity is that they do not approach the Local Government Board, and explain what they want. Hitherto they have insisted on giving to such compiler the title of medical officer of health under the Local Government Act, and this naturally does not meet with approval at headquarters. Dr. Thresh's fitness for either post is unquestioned; but the two posts are totally distinct.

AN AMERICAN SURGEON'S VIEW OF THE CHLOROFORM CONTROVERSY.

IN the course of his presidential address, delivered at the annual meeting of the South-Western State Medical Society of Ohio, Dr. J. C. Reeve reviews with some care the experience of American surgeons concerning deaths under chloroform. Reports of such casualties occurring in the States lead him to tabulate the following as causes of death: 1. Sudden death during the stage of struggling or excitement, and this form he finds to occur with alarming frequency. 2. Death from respiratory failure. 3. Death from cardiac paralysis, the heart ceasing to beat while respiration goes on. 4. Death when respiration and circulation appear to stop simultaneously. As to frequency, deaths from cardiac failure are said to be largely in excess of those due to respiratory paralysis. Dr. Reeve criticises the results arrived at by the Hyderabad Commission on the grounds that the number of their experiments was too small when as good a record is extant as 1 death in 28,000 administrations, Confederate army; 1 in 15,000 (Hunter Maguire). He adds that such records do not represent the true mortality, as some hospitals show as high a rate as 1 death in 200 administrations. Dr. Reeve questions the validity of arguments based upon experiments made upon the lower animals, pointing out that it is a well-substantiated fact that drugs do not always affect human beings and the lower animals the same way—e.g., elaterium kills dogs but does not purge them, pigeons bear enormous doses of morphine, and rabbits cannot be killed with belladonna. The weight of clinical evidence alike of England (Snow), Germany (Kappeler), and America, Dr.

Reeve avers is entirely against the Commission's finding that primary heart failure does not occur in chloroform narcosis, and cases are cited in which it is stated the heart stopped before respiration ceased. He concludes by saying: "I protest, in the interest of patients, against the doctrine that chloroform can be administered with absolute safety"; and Dr. Reeve insists that such a conclusion can only be arrived at by "ignoring a vast amount of evidence, both experimental and clinical—evidence which outweighs all theories and all doctrines, no matter whose names may be appended to them." We, consistently with our motto, "*Audi alteram partem*," can at present only weigh evidence, and are most willing to receive testimony both for and against the views which have been advanced by Snow and Clover on the one hand and Syme and Lister on the other.

TREATMENT BY SUSPENSION.

LITTLE seems now to be written or said regarding this method of treatment in this country. On the Continent, however, it is still used, but apparently its sphere is being gradually narrowed. In the *Deutsche Med. Wochenschrift*, 1890, No. 37, Rosenbaum gives the results observed in a series of cases seen at Mendel's clinic in Berlin. Of sixty cases which had a full course of treatment, there were twenty-five which improved. The improvement was most marked as regarded ability to stand and walk; the pains were lessened in frequency, but not abolished; incontinence of urine was temporarily improved in some cases, but it is not claimed to have been cured in any. As to improvement in the acuteness of vision in cases where the sight was affected, nothing very definite seems to have been experienced. It is to be noted that the cases in which improvement is said to have taken place are all cases of locomotor ataxy. The author is not enthusiastic as to the efficacy of suspension, but thinks it might be tried, and is of opinion that in estimating its value from the therapeutic point of view allowance must be made for the very considerable mental effect produced on the patient.

TYPHOID EPIDEMIC AT PISA.

AN Italian correspondent writes:—"Italy owes so much of her revenue to the sojourn in her cities of visitors from abroad that her reluctance to deter these welcome guests by publishing the truth as to the prevalence of disease within her borders is intelligible if inexcusable. The recent outbreak of typhoid at Pisa illustrates this habit of hers. Since the close of August there has been a gradual increase of typhoid cases in that famous university town and art resort, first in units, then in tens, till quite recently the figures reached, out of a population of 60,000, the formidable proportion of 200 per day. On the 10th inst. the numbers had fallen to twenty per day, and there is no doubt that the epidemic is disappearing; but it is only now that we are permitted to know the full extent of the visitation, while for the last two months the tourist wave has been passing slowly through the city in utter ignorance of the danger it was incurring. And that danger was, indeed, a terrible one, to avert which the city authorities opened lazarettos, reinforced the resident medical staff by contingents from the outside, pressed even students into the service, procured chemical experts to analyse the drinking-water, practised every precaution known to the sanitary engineer, and opened, to defray the expenses incurred, a subscription which King Humbert headed with 10,000 lire. The Government inspector, Signor Canalis, assisted by competent coadjutors from the city, the commune, and the university, has been diligently investigating the cause of the outbreak, and his report is awaited with much interest. Meanwhile, it is an open secret that that report will set forth the impurity of the drinking-water as the main source of the disease—as, indeed, must be manifest to all who know the channel through which the water-supply of Pisa comes. The aqueduct which brings it into the city is as old as the days of the Medici, and most probably has not for centuries undergone the slightest inspection or repair. Not till she receives a new aqueduct, bringing her water-supply from a pure source, will Pisa place herself above the risk of a recurrence of such terrible typhoid outbreaks as that which, all told, has just numbered 3000 cases. Munich was similarly scourged; but her new aqueduct has given her almost entire exemption from the disease. Naples, 'the typhoid preserve of Italy,' has lately banished the disease from her wells by replacing her old, defective water-supply by pure water from the Serino. Brescia and Milan, both of them notorious for the increase of typhoid within the last few years, are contemplating the construction of aqueducts to bring untainted water from the Alps. Pisa, according to her best sanitary authorities, must do likewise, if she would continue to boast herself the educational centre and art resort she has hitherto been. No doubt the expense of the undertaking will be heavy, and, like other Italian cities, she is, in the present financial state of the kingdom, ill able to encounter fresh burdens. But the health of her inhabitants is paramount, and her fame as a medical school imposes on her a responsibility not shared by such non-academic centres as Brescia or Milan. The Government, as in the instance of Naples, may have to intervene with its aid, and the citizens must be prepared for fresh sacrifices. But, now that she is cognisant of the danger, she must lose no time and spare no effort to prevent a recurrence of what, in so famous a medical school, is little short of a scandal."

ANTHRAX AT THE EAST END.

On the 18th inst. an inquest was held at the London Hospital on a young female hair-sorter who had been admitted into that institution on the 14th. She then had a red spot on her neck with much surrounding inflammatory swelling, and at midnight on the 15th she became collapsed, vomited, dying of cardiac failure in a few hours. A characteristic ulcer was found in the small intestine, so that the case comes under the head of "intestinal anthrax" and malignant pustule. The hair merchant, in whose employ the patient had been for the past two years, said that his firm collected clean cowhair all over the country, that he had never known of any illness in connexion with the hair sorting, nor was he aware of the possibility of disease being communicated through contact with the hair. The case is clearly one of anthrax, and it is unfortunate that the source of the infection has not been traced. We trust, however, that inquiries will be made as to the existence of the disease amongst any of the cattle from which the hair was obtained, unless, as is likely, the sources of supply are not kept sufficiently distinct to permit of any conclusion on this head.

INSANITARY STATE OF MELBOURNE HOSPITAL.

DURING the past six months there has been considerable agitation in Melbourne respecting the alleged insanitary state of the hospital in that city. Mr. T. N. Fitzgerald was the first to draw attention to the subject, and at the sitting of the Charities Commission in July some striking evidence was given which showed the extremely deplorable state existing in that institution. Mr. Girdlestone, for instance, said that the whole construction of the building was faulty, and that it was impossible to keep it in a sanitary state; the house-surgeon's rooms were not fit to live in; the nurses' quarters were close to the erysipelas wards; the

place was saturated with "hospitalism," and it was "a triumph of surgery" to get a wound to heal, the use of disinfectants being necessary at every step. Drs. Grant and Moore confirmed this indictment, adducing strong evidence, not only of the bad construction of the place, but of the prevalence of septic disease; whilst Dr. Youl, the city coroner, said he had drawn attention to the matter twenty years ago. In spite of these grave statements no steps as yet appear to have been taken to remedy the evils,—at least, so we gather from the *Melbourne Argus* of the 28th ult., which devotes much space to the subject. It particularly dwells upon the insufficient and indeed disgraceful accommodation for resident surgeons, and suggests that the secretary's house should be assigned to these officers for their habitation. The authorities certainly merit the gravest censure for permitting medical officers to be lodged so wretchedly; and it is a sad and striking commentary on the matter that during the past twelve years, out of seventy such officers no fewer than seven contracted phthisis, five of whom succumbed to the disease. Now that public attention has been aroused, it will be strange indeed if so wealthy a city as Melbourne should suffer a continuance of this scandalous state of things. Indeed, it seems to us that nothing short of the erection of a new hospital will meet the case.

THE WATER INQUIRY AND THE CITY CORPORATION.

OUR attention has been directed to an article on the London water-supply which appeared in our issue of Oct. 25th, and in which, after referring to the recommendations of the City Corporation's Water Committee that an authority should be constituted to acquire the undertakings of the Water Companies, we discuss the cost of such procedure as based upon the evidence as to value given before the Committee. The position of the Water Committee may possibly be misunderstood from what our article stated, and we therefore desire to point out that the suggestion of the committee did not extend beyond the proposal that an authority should be constituted with the power to acquire the undertakings, and that all questions affecting the value would be considered by the proposed authority. This recommendation is obviously just to ratepayers and shareholders alike, and it will therefore commend itself to those who may be concerned during the coming session in discussing the Bills which will be before Parliament.

OPERATION FOR EPILEPSY.

PROFESSOR KEEN of Philadelphia (*Medical News*, No. 22) recently showed at a clinical lecture a boy on whom he had operated a year previously by removing the so-called hand centre on one side from the cortex in the hope of relieving the epilepsy from which the patient suffered. Before operation the fits were both frequent and severe, the patient was very restless and excitable, and the mind was weak. In spite of some accidents as regards the wound, the recovery from the operation was good, and at the time he was shown his condition was described as being much better, although he was not cured. Fits still occur but with less frequency, and they are of a milder type. Temperament and disposition are much improved, so that he is now able to join in the quiet games and ordinary play of other children, and to interest himself as much as one would expect a child to do in ordinary everyday things. After the operation the hand was completely paralysed, but he has now regained a great deal of power, although, as is to be expected, it is still weaker than the opposite one. As regards the improvement in mental condition it must be observed that the child has been in careful training at a home for imbecile children, so that a part at least of the improvement is, perhaps, attributable to this. It will be interesting at some future time to learn the further progress of this important case.

BACTERIOLOGICAL INSTITUTE FOR SAIGON.

A STEP of which everybody will approve has been taken by the French Secretary of State for the Colonies, M. Etienne, who, in concert with M. Treille, Director of the Health Department for the French Colonies, is at present making arrangements for the establishment of a Bacteriological Institute at Saigon. The object of the institute is to afford the means of studying infectious diseases in warm climates, particularly cholera, dysentery, leprosy, and beri-beri. A regular supply of anti-rabic vaccine lymph will be afforded to medical men throughout Indo-China, according to Pasteur's method of preparing it. The object of the institution will doubtless interest medical men practising in the East Indies and other eastern lands. We understand that the appointment to the directorship of this important institution has fallen upon Dr. Albert Calmette, who is a medical man of the 1st class in the French Service, and at present actually attached to the Pasteur Institute of Paris. The laboratory will be opened during the month of March, and brilliant results are expected from the new laboratory.

THE SHOREDITCH INQUIRY.

THE inquiry as to the sanitary condition of Shoreditch was resumed last week, and evidence given on behalf of the Shoreditch Vestry by Dr. H. G. Sutton, the medical officer of health, and Mr. Hugh Alexander, the chief sanitary inspector. Dr. Sutton proved that a considerable amount of work had been done by the vestry's officers, and that he had, as medical officer of health, represented a number of unhealthy areas to the Metropolitan Board of Works and London County Council, the latter body still having some of these areas under their consideration, while in others the Home Secretary had, as the result of the Council's application, decided that they should be dealt with by scheme, the Council contributing towards the cost of the improvement. Mr. Alexander gave evidence as to the vestry's proceedings in regard to nuisances and the improvement of conditions to which the Mansion House Council had called attention. He stated that the action of the Shoreditch Vestry had been by no means limited to these complaints, but that the authority, in dealing with any premises, did not leave them until they were effectually repaired.

THE Wallsend, Willington Quay, and Howden local boards of health have decided jointly to erect a hospital for infectious diseases for the use of their several districts. As is commonly the case, they have met with opposition wherever they have selected a site, but at last a chance of securing one has occurred. It is in the Wallsend district, and is flanked on the west and south by a deep ravine.

DEATH OF A HORSE FROM HYDROPHOBIA.—A remarkable case of hydrophobia formed the subject of inquiry at the Board of Agriculture on Monday last. A valuable horse, belonging to Mr. F. Hicks, at Dover, was bitten a few weeks ago by a mad dog. Every precaution was taken to prevent rabies, and the animal remained under the care of a veterinary surgeon until last Friday, when its strange behaviour attracted notice. It gradually displayed all the symptoms of hydrophobia, and eventually killed itself by crushing its head against the floor of the stable. The Board of Agriculture have given instructions for the carcase to be kept isolated and the stable locked until portions of the dead animal have been examined by experts.

DEMONSTRATIONS OF DR. KOCH'S TREATMENT IN LONDON.

PROGRESS OF THE CASES.

(*Continued from p. 1252.*)

City of London Hospital for Diseases of the Chest.

THESE cases are progressing well, and giving rise to hopeful expectations. Dr. Heron, having fulfilled Koch's condition of taking, in the first instance, cases of early phthisis for the trial of the liquid, now proposes to go on widening and extending his experience as to how the remedy acts in more advanced cases of lung tuberculosis, so that some guide may be obtained to assist in deciding under what conditions a patient is likely to derive benefit or otherwise from the remedy.

CASE 1.—G. M——, twenty-five; phthisis. The dose now administered is 0·05, which produces little reaction. The patient is up, and seemed so well that it was deemed advisable to allow him to follow his inclination and go about in the corridors of the hospital. The sputum is scanty, and very few tubercle bacilli are to be found in it. The patient complains of slight giddiness in the morning. The cough, formerly so troublesome, has now almost entirely ceased.

CASE 2.—A. D——, aged forty. This patient now receives 0·035 cc. The sputum remains occasionally tinged with blood, and a few moist sounds can be heard over the right lung, but decidedly fewer than previously. Night sweats, formerly profuse, have now completely stopped, and the patient's breathing is very much better. The feeling of lassitude and weariness has disappeared.

CASE 3.—B. W.—— As much as 0·03 cc. has been injected at a dose, and still the patient does not react to the fluid. The sputum contains some dark-yellow lumps of muco-pus, and the physical signs remain unchanged. The patient expressed himself as improved.

CASE 4.—L. F——, aged twenty-one; lupus. The necrotic patches are giving way, and the healing skin is beginning to run in amongst them. The glands are not nearly so much swollen as they were. Still a dimly marked redness beyond the necrotic tissue forms the distinct boundary of the lupoid tissue. This patient has received five injections, and 0·005 was administered. This patient invariably shows much reaction in response to very small doses of the fluid.

CASE 5.—E. R——, aged twenty-six; lupus. This case continues to improve, and the appearance has greatly altered for the better.

CASE 6.—H. D——, aged fourteen; phthisis. This patient has had a rather high continuous temperature, which Dr. Heron says does not seem to be in any way connected with the use of the remedy. The old scar on the hip-joint remains unchanged. Cough is troublesome. The physical signs of phthisis remain very marked.

CASE 7.—H. B——, aged twenty-eight; phthisis. The patient has received 0·03 cc., but shows no reaction. The sputum is very scanty, with few tubercle bacilli in the sputum. She seems to be gaining strength, and is now able to walk about the wards and corridors.

CASE 8.—A. B——, eighteen. No reason has yet been discovered, although several physicians have carefully gone over this case at various times, to explain why this patient should react to this remedy. The only symptoms which in any way tend to clear up the mystery are the swelling and tenderness in both knee-joints and tenderness in the right ankle-joint. The patient now has ceased to react. There was a return of uneasiness in the knee-joint, but no swelling on the 15th inst., when a dose of 0·007 cc. was injected. Since then the dose has gradually been raised to 0·03 (Monday last), but no symptoms of reaction are yet manifest. The patient has been injected in all fifteen times.

King's College Hospital.

The cases in King's College Hospital continue under the care of Mr. Burghard and Mr. Williams. We continue the reports, and are indebted to the house surgeon and to Mr. Whitfield for the use of certain notes of the cases.

CASE 1.—E. C——, aged sixteen, continues to improve rapidly.

CASE 2.—H. F——, aged fifteen. The patient receives now 0·024, which produces a temperature of 100·2°. On Monday a small abscess in the axilla was opened, probably due to absorption going on in the lupus patch on the arm.

CASE 3.—P. F——, aged thirty. Enlarged glands. Since the 17th the patient has coughed very much, and the vomiting has ceased. The glands decreased in size during the first two or three injections, and became more distinct and more easily movable. On the 21st an injection of 0·007 produced no reaction beyond a slight flushing of the face.

CASES 4, 5, and 6 continue to react to the inoculations.

CASE 7.—R. S——, aged twenty-six; lupus. The use of the fluid is producing pain in the eyes and legs. The lupus patches were swollen and very painful. The dose of 0·01 produced again a strong reaction. The tubercular nodules have disappeared.

CASES 8 and 9 are reacting very slightly, and in both instances improvement in the general condition is apparent.

CASE 10.—M. C——, twenty-six; lupus. On the 21st, a dose of 0·013 cc. was administered without producing any reaction. The affected parts are much clearer, only three patches being left.

CASE 11.—N. L——, aged twenty. Lupus on both sides of the neck, extending considerably over the cheek. Was injected the third time, with, however, the dose reduced from 0·01, which produced so severe symptoms, to 0·002, one-fifth of the previous doses, on the 17th inst. The reaction which followed, however, was severe. The patient had a rigor, accompanied by much pain and flushing of the face and neck. The temperature rose to 104·2° within six hours, and remained at that point for six hours longer. At nine o'clock next morning the patient felt very ill, the lupus patches became very much swollen, and exudation took place from the left side of the neck. The pulse rose to 140, and the respirations numbered 32. At present the right side of the neck is quite healed, and the left side is almost in the same condition.

CASE 12.—Anæsthetic leprosy: aged forty-five. This patient received on Friday, the 14th inst., an injection of a full dose (0·01), and the temperature rose to 103°. The injection produced a good deal of pain in the ulnar nerve and in the calves of the legs and knees. The left great toe was much affected and became very red and turgid. The temperature became normal in about thirteen hours. During the reaction three red patches on the left side of the back became much deeper. The patient was much troubled with cough, sickness, and pain in the limbs, accompanied with excessive thirst. On the day following the reaction the right hand became extremely painful. The fourth injection was administered on the 17th inst. The patient was injected at 11.30 A.M. with a full dose, the effects of which were great difficulty of breathing, the patient complaining of a marked feeling of suffocation. The temperature as before rose rapidly to 103°, and became normal in about eighteen hours. The effect of this injection was different from that of the previous ones. The woman became very prostrate under the treatment, and was in a condition of extreme collapse, the pain, however, being absent. The rash came out much more distinctly, and the middle finger of the left hand was considerably swollen. A good deal of nausea, headache, and pain in the chest accompanied these symptoms, and large blebs formed on the right heel and on the left ankle, whereas in the first injection these appearances were found on the little toe. On the 18th cough was again troublesome, and a large blister appeared on the left leg. On the following day the feeling of prostration had passed off, and the patient was much improved in general condition. On Sunday she was again injected, but her previous dangerous condition rendered it necessary to administer a very much smaller dose on that occasion. The same symptoms appeared, but in a much milder form, the temperature, however, again rising to 103° in nine hours, remaining practically at that point for only two hours.

In future we consider that it will be sufficient to give fortnightly records of the above cases.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Fellows' Association, held on Saturday, the 20th inst., at 20, Hanover-square, Mr. Pollock presided.

The Chairman said the meeting had been called on account of the rapid action of the Council in negotiating with the University of London because of the pressure put

upon the University by the Commissioners. He referred to the reception of the deputation by a select committee of the Council of the College. The deputation had pointed out that some change was necessary in the rules connected with the voting papers for the election of the Council, and had also referred to the question of calling a meeting of the Fellows to consider points of importance that might come before the Council. Letters had been received from the secretary to the effect that the Council, having considered the rules relating to the voting papers, had determined to make no alteration in them. That was the only question upon which an explicit answer had been given. At the general meeting, when the question of the meeting of Fellows to consider any question of interest to the College was raised, the Council referred the matter for counsel's opinion, by which it promised to be guided. No explicit reply had yet been given on this point.

Mr. Holmes moved: "That this meeting desires to record its emphatic protest against any final settlement between the Council of the College and the Senate of the London University, in the matter of the reconstitution of the University, without the Council of the College having consulted either the Fellows of the College or, if they cannot be consulted separately, a general meeting of the Fellows and Members." In moving this resolution he did not wish in any way to criticise the scheme that had been settled for the reconstruction of the University. He had seen it announced that some sketch of a plan had been forwarded to the Privy Council. A scheme was said to have been formulated, even as to its details, but to which many objections had been raised, principally by the provincial schools of medicine in England. He did not know, however, whether the scheme had a substantial existence or not, but negotiations were going on between the Colleges and the University, the issue of which must seriously affect the position of every Fellow and Member of the College of Surgeons; and to act in the name of the College of Surgeons without communicating any of the details of the scheme to any person whatever out of their own body—to claim the absolute right of concluding a treaty on behalf of the Fellows and Members with the University of London, was a state of things which, if legal, was quite wrong, and should not be tolerated a moment longer than could be helped. The Fellows had, he thought, a legal right to be consulted in affairs of such magnitude affecting themselves. Some of the Council seemed to think that by claiming a vote as to the result of the negotiations the Fellows were thereby claiming the right to conduct the negotiations themselves. He referred to the origin of the College, and stated that no City Company would be allowed to amalgamate with another on the motion and unrestricted action of the master and wardens. The Members of the College appeared to have lost all rights, and to be simply pawns, to be moved about the board by those twenty-four gentlemen who formed the Council.

Mr. Mayo Robson seconded the resolution, which was carried unanimously.

Dr. Collins then moved: "That a committee of the Association, with power to add to their number, be authorised to act as a deputation to attend, if necessary, before the London University, the Lord President of the Council, and the Commission of the Teaching University for London." As a Fellow of the College, he knew nothing of the nature of the negotiations now in progress, while as a member of Convocation of the University he was thoroughly acquainted with the details of the scheme and of the many revised schemes which had appeared from time to time. He pointed out the anomalous position occupied by members of the Royal College of Surgeons as compared with a member of Convocation in negotiations of this kind, and emphasised the fact that they stood in an inferior position to any other college or corporation of a similar nature, and also to the Royal College of Physicians. In a few weeks the Lord President would be master of the situation, and then perhaps suitable witnesses would appear before him on behalf of the Fellows in order to prevent any serious mistakes that might be made.

Mr. Norton seconded the resolution, which was also carried unanimously.

The Chairman announced that Lord Cranbrook had acknowledged the receipt of the resolutions previously passed, but had made no observations as to their having been before him.

Dr. Collins: No scheme is before him as yet.

Mr. Tweedy moved: "That a dinner of the Association be held in April next." He thought that would strengthen the interest in the Association. The date would be fixed by the Committee.

The motion was seconded by Mr. Dunn, and carried unanimously.

A few remarks from the Chairman concluded the meeting.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 4935 births and 4681 deaths were registered during the week ending Dec. 20th. The annual rate of mortality in these towns, which had been 21·5 and 21·3 per 1000 in the preceding two weeks, rose again to 25·1 last week, a higher rate than in any week since March last. The rate was 26·0 in London and 24·4 in the twenty-seven provincial towns. During the past twelve weeks of the current quarter the death-rate in the twenty-eight towns averaged 21·1 per 1000, and exceeded by 0·3 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 15·2 in Leicester, 16·0 in Derby, 16·1 in Hull, and 18·6 in Bradford; the highest rates were 28·5 in Plymouth, 29·4 in Cardiff, 31·9 in Manchester, and 51·6 in Preston. The deaths referred to the principal zymotic diseases, which had increased from 430 to 483 in the preceding three weeks, further rose last week to 511; they included 216 from measles, 107 from whooping-cough, 51 from scarlet fever, 51 from diphtheria, 47 from "fever" (principally enteric), 39 from diarrhœa, and not one from small-pox. The lowest death-rates from these diseases were recorded in Leicester, Hull, Norwich, and Derby; the highest in Birkenhead, Bolton, Salford, and Preston. The greatest mortality from measles occurred in Birkenhead, Cardiff, Manchester, Salford, Oldham, Bolton, and Preston; from scarlet fever in Liverpool; from whooping-cough in Halifax, Birmingham, Birkenhead, and Preston; and "fever" in Halifax and Sunderland. The 51 deaths from diphtheria included 32 in London, 5 in Salford, 4 in Birmingham, 2 in Liverpool, 2 in Manchester, and 2 in Birkenhead. No death from small-pox was registered in any of the twenty-eight towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1752, against numbers declining from 2122 to 1803 on the preceding six Saturdays; the patients admitted during the week were 108, against 151 and 125 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 375 to 487 in the preceding three weeks, further rose to 752 last week, and were as many as 282 above the corrected average. The causes of 108, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Brighton, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Blackburn, Huddersfield, Halifax, and Hull.

THE SERVICES.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Deputy Inspector-General Garland W. L. Harrison to Plymouth Hospital (dated Dec. 20th, 1890); Surgeon R. H. T. Browne to the *Duke of Wellington*, additional (dated Dec. 19th, 1890); Mr. Ernest W. Skinner to be Surgeon and Agent at Winchelsea, Dog's-hill, and Haddocks.

VOLUNTEER CORPS. — *Royal Engineers* (Fortress and Railway Forces): 1st Durham: John Dickinson Leigh, M.B., to be Acting Surgeon (dated Dec. 20th, 1890).—*Rifle:* 2nd Volunteer Battalion, the Manchester Regiment: Thos. Carr, Gent., to be Acting Surgeon (dated Dec. 20th, 1890).—1st Cadet Battalion, the Queen's (Royal West

Surrey Regiment): Timothy Holmes, Gent., to be Acting Surgeon (dated Dec. 20th, 1890).

VOLUNTEER MEDICAL STAFF CORPS. — The London Division: Surgeon G. S. Woodhead, M.D., from the Edinburgh Division, to be Surgeon (dated Dec. 20th, 1890).—The Maidstone Division: Surgeon J. Grant, M.B., resigns his commission (dated Dec. 20th, 1890).

Correspondence.

"Audi alteram partem.

THE TUBERCLE BACILLUS.

To the Editors of THE LANCET.

SIRS,—In his address to the International Medical Congress in Berlin Dr. Koch is reported[1] to have said: "Direct sunlight quickly killed bacteria, the tubercle bacillus for instance; even daylight produces the same effect, though more slowly. Cultivations of the tubercle bacillus propagated for from five to seven days at a window died."

The fact thus briefly stated is a weighty one. It points to the conclusion that in the chemical ray of the sun we have an agent by which the prevention of consumption is to be compassed. The demonstrated effect of light on the bacillus seriously endangers, if it does not destroy, the great (theoretical) source of infection in tuberculosis. But the special object I have in view now is to suggest that the results of these later observations materially affect Koch's original assumption that the tubercle bacillus is an obligate parasite—the bold assumption which has been accepted and acted upon as confidently as though its soundness had been determined. For it is upon it that the futile prophylaxis (*re* phthisis) of continental Europe is based.

There is no larger question relating to the causation of tuberculosis than the first of the two questions Koch put to himself after his brilliant discovery of the cause of tuberculosis—"Where do the parasites originate, and how do they gain entrance into the body?" As the precise nature of his reply to the former of these questions would appear to have been lost sight of, it may be as well to give it in his own words: "With reference to the first question, it is necessary to decide whether the infectious material develops only under such conditions as are provided by the animal body, or whether, as can the splenic fever bacillus, it can pass through its development process in any place free in nature. The results of several experiments showed that the tubercle bacillus can grow only at the temperature of from 30° to 41° C. Under 30° and at 42° not the slightest growth took place during three weeks' time; while, on the other hand, the bacillus anthracis grows actively between 20° and 42° or 43° C. *On the ground of this one fact* the first question can be answered. In temperate zones at no time does there occur at least two weeks of a continuous temperature of over 30°. *It follows*, therefore, that the tubercle bacillus in its process of development *is limited to the animal body*, and is, moreover, *not an accidental*, but a *pure* [or '*true*'] *parasite*, and can *only originate in an animal organism.*" [The italics are mine.]

Never, I venture to say, in botany or biology has so large and momentous a conclusion been drawn from so small and insignificant a premiss. For this one fact, from which Koch says authoritatively, *it follows* that the tubercle bacillus is a true (obligate) parasite, is simply the fact that he failed to grow the vegetation outside the body below blood-heat.

In my book, "The Prevention of Consumption,"[2] the main contention is that the bacillus of tubercle is not a "true" parasite, and I endeavoured to show that every clinical fact and all known phenomena connected with the incidence of phthisis were in perfect accord with the supposition that it is an "accidental" parasite. From my arguments in that work, it will be seen that what I inferred (from the phenomena I cited) in regard to the effect of the sun on this vegetation has been experimentally confirmed by Koch. Whether daylight was or was not the disturbing element in his attempts to cultivate the bacillus under 30° C. there are not sufficient data to show. All that is clear is that chemical light was not specially taken into account in the cultivations, and that, consequently, the amount of chemical light admitted into the laboratory may have inhibited the growth of the vegetation. It is quite possible, indeed, that the bacillus would have been found to grow in the dark on some one or more of the soils on which it could not be got to grow in broad daylight, or even in diffused daylight of low chemical intensity. In short, the value of the light may have been the one thing that precluded the growth. Inasmuch as Koch's latest revelation is a virtual confession that his attempts to cultivate the bacillus are, if not vitiated, at least incomplete or defective, and therefore valueless, by reason of his having omitted to take chemical light into consideration, it is now easy enough to see that the ground is cut from under the assumption of obligate parasitism. It is palpable that the culture processes will have to be gone through again in order to validate the one fact from which true parasitism has been, as I have contended, wrongly inferred. If I have been forestalled in drawing attention to this matter so much the better. The sooner the arbitrary dictum that the bacillus is a true parasite is dealt with effectively the sooner the way will be seen to an efficient mode of preventing consumption. On this point it may, perhaps, be permissible to observe that my views of preventing much tuberculosis and of precluding all phthisis, speculative as they are, may not appear so wildly speculative or so visionary and impracticable as they were taken to be now that it has been shown that the sun kills the tubercle bacillus. These views were based on the assumption that this bacillus (or its parent form) is a saprophyte (and facultative parasite in the animal organism) growing "free in nature," and on the inferences drawn from certain data (given) that this saprophyte grows in, amongst other places, the dark or insufficiently lighted dormitories of man. This recent demonstration of the inimical effect of the sun on the bacillus is therefore strong additional proof of the soundness of the principle in the modes of sun-prevention of phthisis which I submitted, together with other measures directed to the destruction of the infective vegetation.

I am, Sirs, your obedient servant,

Melbourne, Victoria, Sept. 28th, 1890. C. CANDLER.

*** We have been compelled to curtail somewhat Dr. Candler's lengthy communication.—ED. L.

[1] THE LANCET, Aug. 10th, 1890, p. 356.
[2] Reviewed in THE LANCET, Oct. 1st, 1887.

ENTERIC FEVER IN TROPICAL CLIMATES.

To the Editors of THE LANCET.

SIRS,—The whole question of enteric fever in tropical climates would be much simplified if we were able to follow the belief of Mr. Sherman Bigg (late staff surgeon, Allahabad), who has given his very practical views in THE LANCET of Oct. 25th, and if it could be allowed that enteric fever may be due to chill. In 1889 two great authorities propounded the theory that chill may be the cause of certain diseases generally believed to be due to specific poisons. Dr. John Harley, in his Lumleian Lectures, gave it as his belief that chill might give a man enteric fever, just as it might give him dysentery, diarrhœa, or simple continued fever. Surgeon-General Sir W. Moore, before the Epidemiological Society (THE LANCET, Dec. 21st, 1889), stated that "so-called malarious fevers are caused by ..... chill." In favour of the chill theory as regards enteric fever, we have the fact that, in spite of well-built barracks and great sanitary improvements, it is rife in India; in fact, even allowing for confusion of diagnosis between remittent and enteric fever, as prevalent as ever it was. If medical officers would suspend any fixed belief in the specific poison theory, they might find much to confirm them in the belief that enteric fever may be due to chill. At Suakin, while native troops suffered from dysentery and diarrhœa—they also suffered after a time from scurvy and beri-beri—the Europeans suffered from enteric fever. The men of the Shropshire Regiment at Graham's Point—away from the town, and with good sanitary surroundings—had many cases of enteric fever. A large number of these men were continually bathing in the sea, and they remained in the water a long time. It is possible that this gave a certain number a chill. It is by no means uncommon in India for those who bathe carelessly in a swimming bath to be attacked by fever. On field service irritability of the bowels is somewhat common, as a result probably of food, work, and conditions of the life combined; a chill

then seeks out the weak organ, and we may have diarrhœa, dysentery, or even enteric fever. At Suakin all the water used by the troops was condensed and free from impurity; none other could be drunk except sea water. All the milk, except a little for certain hospital cases, was condensed, and none other could be obtained. At a school on the Neilgherry Hills, 7000 feet above the sea, an outbreak of fever took place among the 300 boys and sixty girls. Only one girl was affected, and she had enteric fever; in fifteen or twenty cases among the boys there were cases of simple continued fever, intermittent fever, remittent fever, and one case of enteric fever. The water-supply was liable to contamination both in the boys' and girls' school, and had been so for years; it, however, seemed more likely that the cases were due to chill, considering the state of the weather and the fact that an appreciable number of the boys affected, including the boy with enteric fever, had walked some miles to a funeral and had got wet and chilled.

Malarious poison, or an attack of intermittent fever if there is no such thing as malarious poison, seems to put its stamp upon its victims, for the large majority of fever cases among natives of India consists of cases of intermittent fever; these occur at places and seasons free from all suspicion of malaria, and when chill is the probable cause of the fever. The same often happens when a European, who has previously suffered much from malarious fever, gets a chill. There is one point in connexion with tropical chill which should always be borne in mind—viz, the state of the skin: in a hot climate the skin is a very powerful and active organ, compared with which the skin in temperate latitudes is little more than a covering or integument; we see, therefore, how much more violent are the consequences of checked skin action, and how different are the characters of the diseases resulting therefrom in the tropics compared with the same in a cool climate.—I am, Sirs, yours obediently,

S. L. DOBIE,
Secunderabad, India. Surgeon-Major, 1st Madras Lancers.

SUPRA-VAGINAL AMPUTATION OF THE UTERUS.

To the Editors of THE LANCET.

SIRS,—Mr. Milton's paper much interested me, not merely because he has, by his cases, three times shown that the method of operating which, after a not inconsiderable acquaintance with the literature of the subject, I believe I was the first to advocate, but also because I differ from his modest opinion that a few cases are not enough to establish a mode of operating. His cases, mine, and those of others are more than sufficient to prove the superiority of the intra-peritoneal treatment of the stump when combined with the surgical ligature of the uterine arteries. Gynæcologists, pure and simple, have missed or overlooked a proceeding which seems obvious (after the fact) to the surgical mind. It is now some years since I advocated a plan almost identical with that Mr. Milton adopted. I have practised this plan successfully since, and intend to publish the cases, with illustrations, as soon as my material is forward enough. Before I published my remarks in a contemporary I had lectured on the subject at the Hospital for Women, and had often spoken about this method, and the plan of total extirpation—i.e., leaving no cervix or stump—to visitors, students, and colleagues. I also believe, notwithstanding Mr. Tait's brilliant results after removing the appendages, that the best method of dealing with uterine myoma, when ripe for operation, is to remove the peccant organ, and I agree with Mr Milton that early operation is to be recommended. Mr. Tait has written, "I hate hysterectomy," or words to that effect; and no wonder, when he had only the extra-peritoneal plan at command, and objected to the intra-peritoneal, as he and also Dr. Bantock did when I spoke in its favour at the British Gynæcological Society about one and a half to two years ago. Dr. Bantock has been successful with the extra-peritoneal method, having a mortality of something like 15 per cent., or it may be somewhat less; but the all-round mortality of the operation is far higher, and though I admit that it is unfair to judge an operation by its all-round mortality rather than by its results in the hands of experts, still I have no hesitation in saying that even in the hands of the latter the death-rate of extra-peritoneal hysterectomy is far too high at present. Doing away with the many risks of an outside stump, experience, so far as it has gone, has already clearly shown that either the intra-peritoneal treatment of the stump or complete hysterectomy is preferable, and will soon become the vogue. In cases in which the cervix is much involved it would be very difficult, if not impossible, to tie the uterine arteries; in such cases the abdomino-vaginal complete method would seem to be indicated. The report of my observations at the discussion on abdominal surgery at the Medical Society being incomplete, Mr. Milton could not know that I was the first to propose, and to subsequently execute, the plan which he has so successfully carried out

I am, Sirs, yours obediently,
H. A. REEVES,
Dec. 2nd, 1890. Surgeon to the Hospital for Women.

FEES FOR MEDICAL ATTENDANCE ON THE POLICE.

To the Editors of THE LANCET.

SIRS,—The deputation appointed by the police medical officers of Kent at their meeting held at Ashford on Nov. 28th last was courteously received by the Standing Joint Committee on the 18th inst. The chairman of that committee informed the deputation that the Standing Joint Committee acceded to their request that the scale of fees in use in East Sussex (see THE LANCET, page 1248) should form the basis for remuneration of medical attendance on police in this county, and that the fees for extra medical services should be those allowed by the Poor-law Board. This scale of fees is to be tried for one year. I cordially endorse the request of the chairman that the medical men in Kent will loyally carry out this compact in their attendance on the constabulary and give such services to the members of the force as are just and necessary. The committee stated that the abuse of the charges for medicine (now abolished) by a few medical men had led to their recent action in reducing the fees. I trust that this will be considered by all a satisfactory solution of the difficulty, in which case I am sure the services of the deputation are amply repaid.

I am, Sirs, yours faithfully,
Maidstone, Dec. 20th, 1890. CHARLES E. HOAR, M.D.

BURIAL *VERSUS* CREMATION.

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of the 13th inst. you quote some arguments of Dr. W. Parker in favour of burial as against cremation, and among others one to which I would like to take exception—viz., that the former is the more natural procedure of the two. I am at a loss to understand in what sense Dr. Parker uses the word natural. If he simply means that among civilised nations burial is more common than cremation I quite agree with him, but the fact that a custom is widespread is not necessarily an argument in its favour, and does not prove that it might not with advantage give place to another. It is often said by those who do not think clearly, and are unaccustomed to measure their words, that we are living an artificial, an unnatural life. Possibly, therefore, when Dr. Parker tells us that burial is more natural than cremation, he means that it is the method employed by man in a so-called state of nature. If that be his meaning, however, he will find it hard to justify it by facts. Certainly not a few uncivilised peoples dispose of their dead in some other way than by burial. Many instances of these other ways might be quoted without difficulty, but one or two will suffice. The deceased Masai is carelessly thrown without the kraal, to be devoured by the first hyena or other predatory animal with a taste for human flesh which happens to come that way; while among other savage communities the corpse is dried and placed on a platform raised some distance above the ground. Nor do we find among races much higher in the scale of civilisation than these burial by any means universal. The Egyptians embalmed their dead, the Romans burned theirs, while the modern Parsee consigns his to the Tower of Silence, where they find an immediate sepulchre in the hungry maw of the waiting and expectant vulture. The

words "more natural" convey to me no definite meaning. The adjective "natural" is one which admits of no comparison, and no method of disposing of the dead can be called more natural than another. Many methods are in use among men; and, as they are, they are all equally natural. Burial is that method to which we have been reconciled by custom, and which is least repugnant to our present feelings; but customs alter and feelings change, and when, in the future, cremation has taken the place now occupied by burial, it will offend no susceptibilities, and will seem, what to Dr. Parker burial seems now, the "more natural procedure of the two."

I am, Sirs, yours sincerely,

Gourock, Dec. 16th, 1890. A. LEITCH.

THE WORKING OF THE NEW LUNACY ACT.

To the Editors of THE LANCET.

SIRS,—The Lunacy Act, 1890, suffers greatly from the remarkable manner in which some people endeavour to twist it, and then complain that the Act is at fault because it will not act. Take the case mentioned in last Saturday's LANCET. There we find that nothing is said as to whether the patient is a pauper or not; but we may assume that she is, because further on it is stated that she is a friendless woman. Then we find that a medical man is sent for and makes an order for the removal of the case to an asylum This order is given to a relieving officer, who runs about endeavouring to find a justice qualified to sign the order of admission and the relieving officer fails to find any such justice, except one, who was upon the point of signing, and then found out that he was not qualified—fortunately, perhaps, for him. Now the whole secret of this muddle, and it cannot be called anything else, is due to the want of knowledge of both officers of their duties under the new Lunacy Act. The medical officer had no authority to make an order for removal of the patient to an asylum. He should have given notice to the relieving officer—Sections 13 and 14,—and the relieving officer should on receiving that information have given notice—Section 14-2, Section 15—to a justice having jurisdiction. Furthermore, under Section 20 the relieving officer had power and authority to remove the patient to the workhouse, and there to be detained for a period of three days, as she was violent and dangerous. Then the justice—not one specially appointed under the Act, but anyone having jurisdiction in the district—would have directed a medical man to examine and report on the mental condition of the patient, and acting on that report would have signed the necessary order of removal. In all pauper cases the justice must personally see the alleged lunatic (Sec. 14, Par. 3), and the specially appointed justices only are to act in the case of private patients. In these latter cases the justice may sign without seeing the patient. So we see a case which could easily, probably, have been managed in the workhouse for three days, while the necessary steps were taken, left to the tender mercies of unskilled attendants. Of course the Act will not work if it is read upside down. The medical man does not appear on the scene except at the request of the justice.

I am, Sirs, yours obediently,

M.D.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Koch's Treatment of Tuberculosis.

DR. MCKEE, curator of the museum of the Royal College of Surgeons, who was recently deputed by the Council to visit Berlin and investigate the method of Koch's treatment of tuberculosis, delivered a lecture at the College on the 18th inst. on the subject, before a large audience, which was presided over by Mr. H. Gray Croly, President. Dr. McKee described the various effects of the injection of the fluid in cases of lupus of the face. Large doses were not necessary to produce constitutional reaction. His experience of Koch's second proposition went to convince him that it was true, with this slight modification—that local reaction was much more constant than general. The next question which presented itself was, Could the remedy *per se* be productive of danger? Undoubtedly there was some danger attending its application. In one case which had come under his notice three injections of a centigramme each brought about a state of total collapse. By Dr. Koch's discovery the position of persons suffering from chronic forms of tuberculosis had become full of hope. Even though the growth of bacilli was not checked there was every reason to believe that the healthy tissues of the body were absolutely protected against their invasion so long as the treatment continued. In one respect Dr. McKee said he could not agree with Professor Koch, and that was in his statement that in certain cases of recent and very severe tuberculosis cures had been already effected. He thought that sufficient time had not yet elapsed to enable them to state this. The difficulty was inherent in the fineness of the remedy itself as to diagnostic tests, and they possessed no final means of diagnosis by which the certainty and extent of its action might be tested. However, everything he had seen led him to entertain a strong hope that Koch's statements would be ultimately confirmed.

Lismore Union.

Dr. Denneby, medical officer of Ballyduff dispensary district, has been removed from his post by a sealed order of the Local Government Board, on the ground that he had refused to reside within his district. The Lismore guardians at a meeting last week unanimously adopted a resolution requesting the Local Government Board to reconsider their decision, and stating that Dr. Denneby was an able and efficient officer.

Dec. 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Distribution of Prizes at the Academy of Medicine.

ON Tuesday last this annual ceremony took place in the somewhat dingy-looking building in the Rue des Saints-Pères. The exterior was decorated, as usual, with bunting, and the scene was graced by the presence of numerous fair ladies.

Reform of the System of Examinations at the Faculty of Medicine.

Your readers are probably aware that at the examinations for the degree and for the diploma of *Officier de Santé* of the Faculty of Paris the written test is excluded. Candidates are arranged in series of from four to six, and the *viva-voce* examination takes place in public before a board of examiners composed of one professor (who presides) and two *professeurs-agrégés*, all three luminaries being arrayed in their gorgeous robes. Each examiner puts questions to the candidates in turn, and, the examination ended (about seven minutes are allowed each candidate by each examiner), the room is cleared, and notes are compared, no definite system prevailing for the classification of candidates. On Thursday last the professors of the faculty decided to submit to the Minister of Public Instruction a modification in the mode of conducting these examinations. It is proposed to arrange the candidates in series of ten, and each candidate will in his turn retire into an adjoining room, there to be questioned by an examiner, and so on till he has run the gauntlet of the three examiners. The examiner will accord the candidate a white, red, or black ball according to his merits, and the final result will subsequently be decided according to the average of good and bad balls.

Priests versus *Doctors.*

A memorial addressed by the Medical Association of the Department of the Vosges to the Bishop of St. Dié serves to convey an idea of the difficulties commonly encountered by our Gallic brethren practising in the provinces. In this document our *confrères* complain that certain of this prelate's ecclesiastical subordinates are in the habit of exercising undue influence over their flock in the matter of the choice of a medical attendant, and this to the detriment of many a worthy and capable practitioner, whose only fault is that he does not happen to be a *persona grata* at the *presbytère*. Not content with this *rôle*, they even go to the length of diagnosing and treating cases, and their example is followed in certain villages by sisters of various religious orders. When, as too often happens, a fatal result is impending, the doctor favoured by the clerical party is summoned, in order to cover the responsibility of

the amateur Galen. The memorialists inform his lordship that this scandal is not limited to his diocese, but that the abuse prevails throughout all country districts in France.

Traumatic Tuberculosis of the Tongue in a Phthisical Patient.

M. Toison communicates an example of this curious phenomenon to the Société Anatomo-Clinique de Lille. A man, aged forty-two, affected with chronic phthisis, accidentally bit his tongue during violent efforts to expectorate. The small resulting wound failed to unite, but resolved itself gradually into an ulcer the size of a fourpenny piece. Notwithstanding the absence of the small yellowish or white granulations said by the late Professor Trélat to be pathognomonic of tuberculous ulcer of the tongue, the diagnosis was made in this sense. An enlarged submaxillary lymphatic gland could be felt on *each* side (the ulcer was situated on the right border of the tongue, near the tip). Microscopic examination of the ulcerating tissue after ablation revealed the presence of bacilli, although none were found in the detritus before removal.

Prophylaxis of Lead Poisoning.

M. Lavrand states, in the *Journal des Sciences Médicales de Lille*, that he has found the administration of the iodide of iron pills of the French Codex, either alone or associated with phosphide of zinc, efficacious in arresting the progress of saturnism in workers in white lead. All the patients presented the earthy complexion characteristic of the initial stages of saturnism. The author found that under this treatment, even though the patients continued to ply their trade, the general health improved and the amount of hæmoglobine increased.

Mortuaries in France.

The only *dépôt mortuaire* existing in France was inaugurated on Sunday last, at the cemetery of Montmartre. Another will soon be erected at the Père-la-Chaise Cemetery.

Paris, Dec. 23rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Hypnotism and Suggestion.

THE editor of a fortnightly periodical published in Berlin lately invited a number of eminent physiologists and neurologists to answer the question whether science regards the far-reaching consequences of suggestion of which one reads in works of fiction, especially the sudden and abject subdual of one person's will to that of another, as accordant with proved facts. Du Bois-Reymond answered emphatically in the negative, declaring the compulsion which is said to be exercised on hypnotised persons to be simply a subject for the alienist, and warning against the introduction of such scenes in fiction. On the latter point Albert Eulenburg agreed with him, and utterly rejected the idea of the transference of one person's will to another without physical mediation, but declared that the therapeutic as well as the mischievous effects of hypnotism and suggestion were proved facts. N. Preyer went even a step further. Absolutely rejecting telepathy, he designated hypnosis and suggestion as phenomena of very great importance, and especially expressed the opinion that the latter was destined to play a part in medicine of which people had now no conception. Helmholtz would not deny that there was a kernel of truth in the hypnotic phenomena; but what was true in them could hardly seem wonderful. The great part they played in public discussion was only a proof of the love of the wonderful which characterised our age. The hypnotic wonders were of the same rank as those of magnetism and spiritualism, and not much to be distinguished from jugglers' tricks. The Swiss alienist Forel answered that he regarded telepathy as an improved, but by no means impossible, phenomenon. It was certain that therapeutic effects could be obtained by hypnosis and suggestion, and as to the mischief that could be done by them, that found its limits in the fact that one could neither hypnotise anybody against his will nor suggest to him anything directly contrary to his nature. Delbœuf's assertion that one could suggest with success only what the hypnotised person wished was a paradox, but unquestionably contained a kernel of truth. However, whilst strongly maintaining the fact of suggestion, he wished, on the other hand, to warn against over-readiness to find examples of it. Several phenomena which he himself had taken for consequences of it had been explained quite naturally on closer consideration. The Vienna physiologist Siegmund Exner answered that hypnosis was a state similar to sleep, and the impulse to do what was suggested to one in this condition was comparable to the effect of a specially vivid dream. As to the question whether hypnotism and suggestion furnished valuable psychological foundations for works of fiction, it seemed to him the same as the question whether intoxication by wine or morphia, with its consequences, furnished worthy themes for the poet's pen. The condemnation of the manner in which literary men of the naturalist school treat these problems was the only point in which all the answers agreed.

Professor Ernst Adolf Coccius.

Professor Ernst Adolf Coccius, who died on the 24th ult., in Leipsic, was one of the veterans of ophthalmology. When he began his studies in this department, the ophthalmoscope had not yet been invented, and the work of Graefe and Donders was still in the future. Coccius was a worthy fellow-labourer of those never-to-be-forgotten benefactors of mankind. He invented a new ophthalmoscope, investigated the phenomena of accommodation and astigmatism, studied glaucoma and the inflammation of the vitreous humour, invented a new ophthalmometer. &c. The most important of his writings are "The Nutrition of the Cornea," "The Use of the Ophthalmoscope," "New Growth of Vitreous Membranes in the Eye," "On Glaucoma," "The Structure and Inflammation of the Vitreous Humour in the Human Eye," "The Mechanism of the Accommodation of the Human Eye," and "Ophthalmometrics and the Measurement of Tension in the Diseased Eye."

Berlin, Dec. 20th.

Medical News.

UNIVERSITY OF DUBLIN.—The following degrees were conferred by the Senate last week:—

Bachelor in Surgery.—Robert Reginald Moore.

Bachelor in Medicine.—Robert R. Moore.

Bachelor in Medicine, Surgery, and Obstetrics.—Walter Scott Alexander, Arthur Aulad Ali, Chas. Robert Browne, Robert Stanley Carnegie, William Richard Dawson, George Donaldson, Henry Seymour Dorman, Edward John Doyle, Richard Dingwell Freeman, Thomas Dufour Halahan, James Mathews Heron, Alfred Hutton Jeremy, John Adam Johns, Richard Lane Joynt, Armar John McFarland, Lionel Arthur Mitchell, Robert William Moore, Gilbert Henry Ormsby, Edward S. Pollock, Vincent Littlewood Roberts, C. John Robinson, Edwin Albert Seale, Sydney Brice Smyth, Edwd. Henry Taylor, Philip Crampton Walker, Jonas Morris Poole White.

Doctor in Medicine.—Alexander McNeill D'Evelyn, Richard Dingwell Freeman, James Wm. Henry Jellett, Henry Noble Joynt, Robert Reginald Heber Moore, Phillip Wm. McCrea, Alexander Pentland, Thomas Marshall Tate.

In absentiâ: Matthew Moriarty (stip. cond.)

ROYAL COLLEGE OF SURGEONS AND APOTHECARIES' HALL IN IRELAND: CONJOINT SCHEME.—The following have passed their Final Examination:—

W. F. Bruen, S. H. Browning, B. Byrne, E. C. Clanchy, E. H. Condon, C. Casey, J. Evans, G. A. Hickey, E. A. Montgomery, W. Montgomery, E. W. McQuaid, G. F. Macnamara, J. C. Macnamara, W. O'Gorman, W. J. Patterson, Alex. P. Swanson, W. A. Thompson, C. A. Treman, Henry Twamley, V. L. Watts.

The following have obtained the diploma in Public Health of the College:—

David Edgar Flinn, Charles Robt. Tichborne, and Henry Whitaker.

EPSOM COLLEGE.—We have been requested by Dr. Holman, the treasurer, to announce that he has received £500 from a medical man for the "benefit of Epsom College." The generous donor does not allow his name to be mentioned.

RESIGNATION OF A MEDICAL OFFICER.—The Toxteth Board of Guardians, in accepting the resignation of Dr. Wilson, the medical officer of the workhouse, passed a resolution expressing their regret at his resignation, and sympathy with him, that ill-health had rendered that step necessary, at the same time conveying the assurance of their appreciation of his professional skill, and their conviction that much of his illness is attributable to his devotion to his duties. The workhouse staff has presented, on the occasion, a gold chain to Dr. Wilson, in recognition of his great kindness and as a testimony of their esteem.

COTTAGE HOSPITAL FOR HORSHAM.—Meetings were held at the Town Hall on Friday afternoon and evening in furtherance of the project for a cottage hospital for Horsham and district. The proposal has met with considerable favour, and subscriptions are flowing in satisfactorily.

THE YORKSHIRE COLLEGE.—Sir Andrew Fairbairn has been elected treasurer of the College, in place of the late Mr. Beckett, M.P. Mr. A. W. Mayo Robson, F.R.C.S., has been appointed Professor of Surgery in the Department of Medicine, in place of the late Professor McGill; and Mr. Edward Ward, M.A., M.B., B.C., has been appointed Lecturer on Practical Surgery.

UNIVERSITY OF CAMBRIDGE.—At the latest meeting of Congregation the report of the General Board of Studies recommending the appointment of an additional demonstrator in physiology, and also an additional demonstrator in experimental physics, both without stipend, was approved. Also the degree of Doctor of Medicine was conferred on Lewis Erle Shore, St. John's.

MEASLES EPIDEMIC, IPSWICH.—A serious epidemic of measles is reported in this town. In the Stoke district 150 children are affected, the majority with measles. In the Trinity district upwards of 200 children are on the sick list, and in the London-road district the epidemic has been so severe that the attendance at the schools is reduced to nearly a half. The centre of the town appears to have escaped the visitation. At the suggestion of the medical officer, Mr. G. S. Elliston, the Board schools have been closed.

FATAL LEAD POISONING, NEWCASTLE.—An inquest was lately held at the Royal Infirmary, Newcastle, on the body of a woman aged thirty-three, who died in the infirmary. The deceased had during the last twelve or thirteen years worked in white-lead works in Gallowgate. She had been ailing for some time from lead poisoning, and had recently been under the medical treatment of the doctor to the works, but, not being properly cared for by those about her, was removed to the infirmary. The evidence adduced clearly showed that the deceased's death was due to lead poisoning, and a verdict to that effect was returned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANGUS, HENRY BRUNTON, M.B., B.S., has been appointed House Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

DICKINSON, GEO. F., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to Charing-cross Hospital.

EAST, C. H., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Kent Church District of the Dore Union.

HALL, A. J., M.B. Lond., L.R.C.P., has been appointed Honorary Physician to the Sheffield Public Hospital and Dispensary.

HALL, F. W., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

HAROLD, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to Charing-cross Hospital.

HENVEY, WILLIAM, M.R.C.S., L.R.C.P. Lond., has been appointed Second Assistant Medical Officer to the North-Western Fever Hospital of the Metropolitan Asylums Board.

JONES, D. J., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Obstetrical Officer to Charing-cross Hospital.

JONES, THOS., M.R.C.S., has been appointed Medical Officer of Health for the Warsop and Mansfield-Woodhouse Districts of the Mansfield Union, vice Stein, resigned.

JORDAN, H. M., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Guy's Hospital.

LAKE, W. W., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Henstead Union, vice Cook, resigned.

LANSDOWN, R. G. P., M.B., B.S. Durh., has been appointed House Surgeon to Guy's Hospital.

PENNY, E., M.D. Lond., M.R.C.S., has been appointed Analyst to the Hull and Goole Port Sanitary Authority.

ROBINSON, M. G., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer and Public Vaccinator for the Second District of the Daventry Union.

SMITH, H. A., M.B., B.C. Camb., has been appointed House Physician to Guy's Hospital.

SMYTH, WM., M.B., C.M. Edin., has been appointed Medical Officer for the Broomhill Colliery and the Radcliffe Colliery.

STABB, E. C., Senior Resident Medical Officer to the Royal Free Hospital, has been appointed Surgical Registrar to St. Thomas's Hospital.

WARREN, RICHD. B., L.K.Q.C.P., F.R.C.S. Irel., has been appointed Honorary Surgeon to the Carrington Centennial Hospital at Camden, N. S. Wales.

WEBBER, H. W., M.B., B.S. Lond., has been appointed Assistant House Physician to Guy's Hospital.

WILEY, A. O., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Rural Sanitary District of the Knaresborough Union, vice Cantley, resigned.

WILKIN, G. CHAS., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon to the London Throat Hospital, Great Portland-street.

WILLIAMS, C. R., M.B., C.M. Edin., has been reappointed Medical Officer for the Second and Third Districts of the Ashby-de-la-Zouch Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ANCOATS HOSPITAL, Manchester.—Junior House Surgeon. Salary £50, with board and lodging.

CITY ASYLUM, Birmingham.—Clinical Assistant. No salary, but board, lodging, and washing provided.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

EDAY, Orkney.—Resident Medical Officer for Eday, Orkney. Salary £55 per year, with practice and free house and garden. (Apply, Inspector of Poor, Eday.)

LONDON HOSPITAL MEDICAL COLLEGE, Turner-street, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £90 per annum.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar (non-resident). Salary £100 per annum.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar (non-resident). Salary £80 per annum.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL FREE HOSPITAL, Gray's-inn-road, London.—Senior Resident Medical Officer. Salary £100 per annum, with board and residence in the Hospital.

SEAMEN'S HOSPITAL SOCIETY (LATE DREADNOUGHT), Greenwich, S.E.—House Physician for one year. Salary £75 per annum, with board, furnished rooms, and attendance.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Second House Surgeon. Salary £50 a year, with board and residence.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Surgeon.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Pathologist, who will also be required to act as Fourth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer. Salary £120 per annum, with an annual increase to £150. Board, residence, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

LARDER.—On Dec. 29th, at the Infirmary, Whitechapel, the wife of Herbert Larder, Resident Medical Superintendent, of a daughter.

O'HARA.—On Dec. 17th, at St. Kilda House, Leicester, the wife of W. J. O'Hara, L.D.S.R.C.S.I., of a son.

MARRIAGES.

BAXTER—SHAKSPEARE.—On Dec. 17th, at St. James's, Swansea, William Whittington Baxter, M.R.C.S., of Glais, Swansea Valley, to Clara, widow of the late John Shakspeare, of West Cross, Swansea.

GORDON—GATES.—On Dec. 18th, at the Bradford Parish Church, by the Rev. Canon Bardsley, D.D., assisted by the Rev. W. H. Keeling, M.A., H. Laing Gordon, M.B., C.M. Edin., son of James Gordon, of Heaton-rise, Bradford, to Maud, elder daughter of his Honour Judge Gates, Q.C., of Bradford.

MATHESON—CAMPBELL.—On Dec. 17th, at St. John's Church, Paddington, Kenneth A. Matheson, M.B., C.M. Edin., to Clement Mactier, daughter of James Campbell, Edinburgh.

DEATHS.

CLYMA.—On Dec. 20th, at 35, Brooke-road, Stoke Newington, Handsford Hosking Clyma, M.R.C.S., late of Great Dover-street, in the 41st year of his age.

GERVIS.—On Dec. 18th, at Pendennis, Weston-super-Mare, Frederick Shorland Gervis, M.R.C.S., J.P., aged 86; formerly of Tiverton, Devon.

MYERS.—On Dec. 18th, at 30, Euston-square, N.W., Archibald Robert Beaufoy, second surviving son of Henry Reynolds Myers, Surgeon-Major Bloomsbury Rifles, in the 24th year of his age. No flowers by desire.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 23rd, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 17	29·87	N.E.	32	..	..	35	29	..	Overcast
,, 18	29·86	N.E.	32	..	..	34	29	..	Overcast
,, 19	29·86	E.	28	..	..	32	27	·24	Snowing
,, 20	29·26	E.	22	..	..	35	20	·12	Overcast
,, 21	29·80	N.E.	35	34	40	37	22	·18	Overcast
,, 22	30·22	E.	24	..	..	30	24	..	Foggy
,, 23	30·35	S.E.	30	..	..	32	23	..	Overcast

Medical Diary for the ensuing Week.

Monday, December 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, December 30.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Frost and Fire. (Adapted to a Juvenile Auditory.)

Wednesday, December 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, January 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Frost and Fire. (Adapted to a Juvenile Auditory.)

Friday, January 2.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Ordinary Meeting. Dr. Leith Napier: The Treatment of Habitual Abortion.—Dr. Macnaughton Jones: A Plea for Obstetric Art.

Saturday, January 3.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Frost and Fire. (Adapted to a Juvenile Auditory.)

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE LUNACY ACTS.

To the Editors of THE LANCET.

SIRS,—With regard to the failure of the working of the Lunacy Act, 1890, mentioned in your annotation of last week, my experience fully agrees with your statements. There is little difficulty in dealing with lunatics in private practice, but when a case of lunacy has to be dealt with in a public institution there is delay, and this delay often is serious. In dealing with lunatics in prisons, each certificate has to be signed by the prison surgeon and another medical gentleman and two visiting justices. Taking the prison I am connected with there is no difficulty in obtaining another signature besides my own, but to secure the attendance of two magistrates on the same day is a luxury. It is not until the second or third day that a second magistrate can be found. I have had a raving lunatic prisoner under my care for whom the second magistrate's signature could not be obtained until the latter part of the third day. This delay can happen, because in this town there are only two magistrates who can be called upon to attend, the others residing at distances of from three to eighteen miles from the prison.

There is no occasion to dilate upon the difference of the unskilled attendance of warders and prisoners upon a lunatic and the value of trained officers of an asylum. Further, there is often not only delay in securing the attendance of two magistrates, but it will happen that when a magistrate does attend he refuses to sign. In the beginning of this year a man was sent to my prison for an offence which he probably committed during an attack of delirium. On admission he appeared sane, but shortly afterwards he became insane. I and another medical man signed a certificate. The following day a visiting justice came and signed. It was not until the third day that a second magistrate had been found able to visit the prison, and when he had examined the prisoner he refused to sign. The man at this time had improved, but to a trained mind there would have been, taking into consideration the previous history, no difficulty in signing the certificate of lunacy. In my report on the case ready for the asylum superintendent I had put "not homicidal, but probably suicidal." This man was put under charge of two attendants night and day. At the end of a fortnight, on coming from the closet attended by his two watchers, he escaped from them and rushed up the stairs at the end of the corridor, evidently intending to throw himself from the third floor, a distance of sixty feet. Being closely pursued, he ran along the corridor off the first landing, and before he could be caught jumped over the railing, falling from a height of twenty feet, but fortunately without injury. A fresh certificate was made out, and this time he was taken to the asylum.

I have suggested to the authorities that in any further alteration of the Lunacy Acts it should be advised that lunatic prisoners should be sent to an asylum on the signatures of the prison surgeon and another surgeon, without waiting to obtain those of two magistrates. Further, that such cases should be reported upon to the Home Secretary by the medical superintendent of the asylum at the end of the first week, and at the end of every week during the first month, if necessary. I would now further suggest that such cases should be reported to the members of the asylum visiting committee. In this way the magisterial safeguard investigation would be made use of without detriment to the lunatic in consequence of his having been detained in a place totally unsuitable for his treatment. It is said there is no place like home when you are sick, unless it be a hospital. Certainly, for the lunatic, there is no place like the asylum, and that quickly.

I am, Sirs, yours faithfully,

Canterbury, Dec. 14th, 1890 PUGIN THORNTON.

"THE INFLUENZA."

To the Editors of THE LANCET.

SIRS,—Dr. Thornton, in his letter in your issue of the 6th inst., states that the last Prison Commissioners' Report affords evidence that the epidemic of influenza was not due to the effects of a wave of the poison passing over us, but rather to its contagiousness. Though this view is, I believe, contrary to the general opinion, I am inclined to agree with it. I particularly noticed, when in England during the epidemic of influenza which visited us during the early part of the year, that large establishments where men—or in cases of schools where boys—were in close contact with each other, the cases were far more numerous than was the case otherwise. Perhaps some of your readers would kindly give their views and experiences in this rather interesting point in the case of influenza.

I am, Sirs, yours truly,

F. WOORE, Surgeon R.N.

H.M.S. *Victoria*, Malta, December 16th, 1890.

Dr. P. B. Bossano (Marseilles).—The most important work by Salomonsen's pupils on tetanus is that by Knud Faber, "Om Tetanus som Infektionssygdom," Kobenharn, Gyldendalske Boghandel, 1890, a work of 150 pages, well written, and with numerous cases and experiments. Dr. Hare had a paper in THE LANCET on Tetanus in 1885–6. Our correspondent will also find at the end of Knud Faber's book other references to Scandinavian literature. Messrs. Ballance, Ruffer, and others at the Brown Institution have, we believe, made experiments on tetanus.

Mr. O'Rorke.—We understand that hospitals alone are to be furnished with it, at least at present.

HÆMOLYMPH GLANDS.

To the Editors of THE LANCET.

SIRS,—I notice in your issue of November 29th a paper by W. F. Robertson on Prevertebral Hæmolymph Glands. I wish to call attention to a paper of mine in the *Quarterly Journal of Microscopical Science*, vol. xxiv. New Series, in which these structures in the human subject are fully described and illustrated. Since writing the paper I have never had time to do any more work on this subject, and I am therefore pleased to find that the views I formed at the time as to these being permanent structures is now fully confirmed.

I remain, Sirs, very faithfully yours,

HENEAGE GIBBES, M.D.,
Professor of Pathology, University of Michigan.

Ann Harbor, Mich., U.S.A., Dec. 9th, 1890.

A Reader.—If an essay is wanted we would refer to Dr. Thorne's address to the Epidemiological Society in the year of the Queen's Jubilee, to be published in the next volume of the Transactions by Shaw and Sons, Fetter-lane.

Mr. Pugin Thornton will see that the point has not been overlooked in our summary this week.

"NEWSPAPER PUFFS AND THE OBSTETRICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—The Society referred to in the paragraph with the above heading (THE LANCET, Dec. 20th, p. 1367) is not the Obstetrical Society of London.—I remain, Sirs, yours obediently,

ALBAN DORAN,
Hon. Secretary, Obstetrical Society of London.

Hanover-square, Dec. 19th, 1890.

THE unusual length of our summary must be our excuse to correspondents for postponing notices and attention to several subjects of interest.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Stephen Paget, London; Dr. Champneys; Sir W. Moore, London; Mr. Usher Somers, Hadfield; Mr. S. J. Hutchinson, London; Dr. Heneage Gibbes, Michigan; Mr. T. Jones, Manchester; Mr. Taylor Simson, London; Mr. Rose-Innes; Mr. Banham, London; Dr. Warner; Mr. A. Doran, London; Earl of Meath, London; Mr. T. Twining; Dr. A. L. Griffith, Harrow; Mr. H. Lund, Manchester; Dr. P. Frankland, Dundee; Dr. Bell, Glasgow; Mr. Horniman, London; Mr. Collins, Norwich; Mr. F. Lankester, London; Messrs. Woods and Co., New York; Dr. Olivor, Indore; Mr. Groves, Kilburn; Messrs. Cassell and Co., London; Mr. Stevenson; Dr. East, Grosmont; Messrs. Keith and Co., Edinburgh; Mr. Sinclair, Selangor; Messrs. Richardson and Co., Leicester; Mr. Saunders, Manchester; Messrs. Mitchell and Co., London; Messrs. Ralli Bros., Manchester; Messrs. Dawson and Son, London; Dr. Pierson; Mr. Roberts, London; Messrs. W. and A. K. Johnstone, Edinburgh; Mr. Hundhausen; Messrs. Kilner Bros., King's-cross; Mr. MacAlister, London; Messrs. Bullock and Co., London; Mr. Hughes, Holyhead; Mr. Haines; Messrs. Thorp and Co., Glossop; Mr. McCartney, Edinburgh; Messrs. Wilcox and Co., London; Mr. Cant, Lincoln; Mr. Woore, Malta; Mr. Leonard Mark, London; Dr. Hoar, Maidstone; Dr. Neale; Messrs. Hill and Son, London; Mr. Biddle, Kingston; Dr. O'Neill, Lincoln; Dr. W. K. Fyffe, London; Mr. J. H. Walters, Reading; W. G. S.; Clarendon Press, London; M.B.; A Reader; East-end, London; A Constant Reader; Delta, London; A. A. L., London.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Morton, Glasgow; Mr. Dumac, Swansea; Mr. Butcher, London; Mr. Hunter, London; Mr. Tully, Hastings; Mr. Phillips, London; Mr. Lockwood, Bradford; Dr. Banks, Riseley; Mr. Ramsdale, Eccles; Mrs. Hitch, St. Leonards-on-Sea; Mr. Tyte, Minchinhampton; Messrs. Byles and Sons, Bradford; Dr. Phillips, Newfoundland; Messrs. Entwistle and Kenyon, Accrington; Mr. Bambridge; Mr. Totten, Shepherd's Bush; Mr. Newbald, Ryde; Dr. Shepherd, Usk; Mr. Cuthbert, West Bromwich; Mr. Cook, Towyn; Dr. May, Hanwell; Messrs. Lorimer and Co., London; Mrs. Belhew, Bournemouth; Messrs. Blondeau et Cie., London; Dr. McCarthy, co. Kerry; Dr. Hartshorn, Kansas; Mr. O'Meara, Leicester; Mr. Thin, Edinburgh; Mr. A. St. Dalmas, Leicester; Mr. Wearne, Penzance; Mr. Abbs, Dewsbury; Mr. Murrell, London; Dr. Woakes, London; Mr. Jellison, Nanking; Mr. Bennett, Burnley; Mr. Burgess, Shetland; Miss Vincent, London; Mr. Spowart, Sheffield; Mr. Chanbury, India; Dr. le Laprade, Lyons; Richards, London; A. N. S.; C. B., London; T. J., Minsterley; Morris Tube Co., London; Russ, Bristol; Elder, London; Medicus, Chester.

NEWSPAPERS.—*Sussex Daily News, Glasgow Herald, Liverpool Daily Post, Sheffield Independent, Huddersfield Examiner, Star of the East (Ipswich), City Press, East Anglian Times, Edinburgh Evening Dispatch, Society, Dundee Advertiser, Yorkshire Post, Liverpool Mercury, Manchester Guardian, Western Mercury, Scotsman, Sunday Times, Builder, West Middlesex Standard, Reading Mercury, Broad Arrow, Metropolitan, Surrey Advertiser, Mining Journal, Spectator, Pharmaceutical Journal, Architect, Chemist and Druggist, Law Journal, West Middlesex Advertiser, Saturday Review, Guy's Hospital Gazette, Hertfordshire Mercury, Windsor and Eton Gazette, Weekly Free Press and Aberdeen Herald, Leeds Mercury, Daily Colonist (Victoria, British Columbia), Insurance Post, Jewish Chronicle, Maidstone Journal, Windsor and Eton Express, Bristol Mercury, The Lazaretto (St. Kitts), &c.*, have been received.

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